

=> fil reg

FILE 'REGISTRY' ENTERED AT 11:00:57 ON 08 SEP 2008

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EIC search

MRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 7 SEP 2008 HIGHEST RN 1047406-12-1

DICTIONARY FILE UPDATES: 7 SEP 2008 HIGHEST RN 1047406-12-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

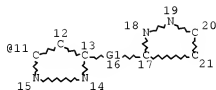
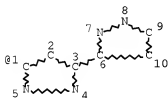
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

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L3 STR



Cb @22

Cb-Cb
@23 @24

Cb-Cb-Cb
@25 @26 @27

G2 28

VAR G1=22/23-13 24-17/25-13 27-17

VAR G2=1/11

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 22

GGCAT IS UNS AT 23

GGCAT IS UNS AT 24

GGCAT IS UNS AT 25

GGCAT IS UNS AT 26

GGCAT IS UNS AT 27

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE

September 8, 2008

10/573,786

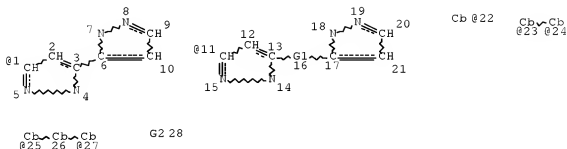
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L5 1041 SEA FILE=REGISTRY SSS FUL L3

100.0% PROCESSED 248813 ITERATIONS
SEARCH TIME: 00.00.06

1041 ANSWERS

=> d que stat 120
L20 STR



VAR G1=22/23-13 24-17/25-13 27-17

VAR G2=1/11

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 22

GGCAT IS UNS AT 23

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GGCAT IS UNS AT 25

GGCAT IS UNS AT 26

GGCAT IS UNS AT 27

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE

=> d his

(FILE 'HOME' ENTERED AT 09:59:22 ON 08 SEP 2008)

FILE 'HCAPLUS' ENTERED AT 10:00:37 ON 08 SEP 2008

E US20070012935/PN

L1 1 S E3
SEL RN

FILE 'REGISTRY' ENTERED AT 10:01:06 ON 08 SEP 2008

L2 25 S E1-25

FILE 'LREGISTRY' ENTERED AT 10:07:17 ON 08 SEP 2008

L3 STR

FILE 'REGISTRY' ENTERED AT 10:12:13 ON 08 SEP 2008

L4 4 S L3

L5 1041 S L3 FUL

L6 10 S L2 AND L5
 SAV L5 YAM786/A

FILE 'LREGISTRY' ENTERED AT 10:15:54 ON 08 SEP 2008
L7 STR L3

FILE 'REGISTRY' ENTERED AT 10:17:42 ON 08 SEP 2008
L8 0 S L7 SSS SAM SUB=L5

FILE 'LREGISTRY' ENTERED AT 10:30:05 ON 08 SEP 2008
L9 STR L7

FILE 'REGISTRY' ENTERED AT 10:31:04 ON 08 SEP 2008
L10 9 S L9 SSS SAM SUB=L5
L11 STR L9

FILE 'REGISTRY' ENTERED AT 10:33:27 ON 08 SEP 2008
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L13 STR L11
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L15 265 S L13 SSS FUL SUB=L5

FILE 'HCAPLUS' ENTERED AT 10:41:16 ON 08 SEP 2008
L16 29 S L6
L17 130 S L15

FILE 'LREGISTRY' ENTERED AT 10:43:18 ON 08 SEP 2008
L18 STR L3

FILE 'REGISTRY' ENTERED AT 10:44:32 ON 08 SEP 2008
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L20 STR L13
L21 1 S L20 SSS SAM SUB=L5
L22 14 S L20 SSS FUL SUB=L5
 SAV L15 YAM786S1/A
 SAV L22 YAM786S2/A

FILE 'HCAPLUS' ENTERED AT 10:57:09 ON 08 SEP 2008
L23 14 S L22

=> fil hcap
FILE 'HCAPLUS' ENTERED AT 11:03:19 ON 08 SEP 2008
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FILE COVERS 1907 - 8 Sep 2008 VOL 149 ISS 11
FILE LAST UPDATED: 7 Sep 2008 (20080907/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d ibib abs hitstr hitind 123 1-14

L23 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:23106 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 138:83329
 TITLE: Use of metal ion chelates in validating biological molecules as drug targets in test animal models
 INVENTOR(S): Rist, Oystein; Hogberg, Thomas; Holst Lange, Birgitte; Schwartz, Thue W.; Elling, Christian E.
 PATENT ASSIGNEE(S): 7TM Pharma A/S, Den.
 SOURCE: PCT Int. Appl., 247 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2003003009 | A1 | 20030109 | WO 2002-DK456 | 20020628 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| WO 2002054077 | A2 | 20020711 | WO 2001-DK867 | 20011221 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2002319118 | A1 | 20030303 | AU 2002-319118 | 20020628 |

PRIORITY APPLN. INFO.:

| | | |
|-----------------|---|--------------|
| DK 2001-1026 | A | 200106 29 |
| DK 2001-1027 | A | 200106 29 |
| DK 2001-1028 | A | 200106 29 |
| DK 2001-1030 | A | 200106 29 |
| DK 2001-1031 | A | 200106 29 |
| US 2001-301931P | P | 200106 29 |
| WO 2001-DK867 | A | 200112 21 |
| WO 2000-EP13389 | W | 200012 29 |
| DK 2001-536 | A | 200103 30 |
| US 2001-280237P | P | 200103 30 |
| WO 2002-DK456 | W | 200206 28 |

OTHER SOURCE(S): MARPAT 138:83329

AB The invention discloses the use of chemical compds. or selections of chemical compds. (libraries) of the general Formula R1XFY(R1)GZR1 [F, G = N, O, S, Se, P; X, Y, Z = (un)branched C1-12 alkyl, aryl, heteroaryl, etc.; R1 = ABC; A = coupling or connecting moiety; B = spacer moiety; C = functional group] for in vivo methods for testing or validating the physiol. importance and/or the therapeutic or pharmacol. potential of biol. target mols., notably proteins such as, e.g., receptors and especially 7TM receptors in test animals expressing the biol. target mol. with, notably, a silent, engineered metal ion site. Use of specific metal ion binding sites of a generic nature in specific biol. target mols. such as, e.g. transmembrane proteins wherein the metal ion binding site is capable of forming a complex with a metal ion is also described. Also disclosed are chemical compds. or libraries suitable for use in methods for improving the in vivo pharmacokinetic behavior of metal ion chelates (e.g. the absorption pattern, the plasma half-life, the distribution, the metabolism and/or the elimination of the metal ion chelates). In order to

improve the efficacy of the impact of the metal ion chelate on the biol. target mol. after administration of the metal ion chelate in vivo to a test animal, it is advantageous e.g. to increase the period during which the metal ion chelate is in the circulatory system and/or localized at the target. Further disclosed are metal ion-chelating compds. designed to be suitable for use in a target validation process according to the invention, as well as libraries of at least two or more of such metal ion-chelating compds.

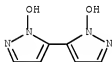
IT 462324-60-7

RL: BSU (Biological study, unclassified); THU (Therapeutic use);
BIOL (Biological study); USES (Uses)

(metal ion chelates in validating biol. mols. as drug targets in
test animal models)

RN 482324-60-7 HCAPLUS

CN 3,3'-Bipyrazole, 2,2'-dihydro-2,2'-dihydroxy- (CA INDEX NAME)



IC ICM G01N033-50

CC 1-1 (Pharmacology)

Section cross-reference(s): 27

| | | | | | |
|----|---------------------------------|------------------------------|---------------------------------|----------------------|--------------|
| IT | 482324-48-1 | 482324-49-2 | 482324-50-5 | 482324-51-6 | 482324-53-8 |
| | 482324-54-9 | 482324-55-0 | 482324-56-1 | 482324-57-2 | 482324-58-3 |
| | 482324-59-4 | 462324-60-7 | 482324-61-8 | 482324-62-9 | |
| | 482324-63-0 | 482324-64-1 | 482324-65-2 | 482324-66-3 | 482324-67-4 |
| | 482324-68-5 | 482324-69-6 | 482324-70-9 | 482324-71-0 | 482324-76-5 |
| | 482324-77-6 | 482324-78-7 | 482324-79-8 | 482324-82-3 | 482324-83-4 |
| | 482324-84-5 | 482324-85-6 | 482324-86-7 | 482324-87-8 | 482324-88-9 |
| | 482324-89-0 | 482324-90-3 | 482324-91-4 | 482324-92-5 | 482324-93-6 |
| | 482324-94-7 | 482324-95-8 | 482324-96-9 | 482324-97-0 | 482324-98-1, |
| | [2,2'-Bipyridine]-4-methanamine | 482324-99-2 | 482325-00-8 | | |
| | 482325-01-9 | 482325-02-0 | 482325-04-2 | 482325-05-3 | 482325-06-4 |
| | 482325-07-5 | 482325-08-6, | [2,2'-Bipyridine]-3-carboxamide | | |
| | 482325-09-7, | [2,2'-Bipyridine]-3-methanol | 482325-10-0 | | |
| | 482325-11-1 | 482325-12-2 | 482325-13-3 | 482325-14-4 | 482325-15-5 |
| | 482325-16-6 | 482325-17-7 | 482325-18-8 | 482325-19-9 | 482325-20-2 |
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| | 482325-31-5 | 482325-32-6 | 482325-33-7 | 482325-34-8 | 482325-35-9 |
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| | 482325-46-2 | 482325-47-3 | 482325-48-4, | [2,2'-Bipyridine]-3- | |
| | carboxaldehyde | 482325-49-5 | 482325-50-8, | [2,2'-Bipyridine]-3- | |
| | butanamine | 482325-51-9 | 482325-52-0 | 482325-53-1 | 482325-54-2 |
| | 482325-55-3 | 482325-56-4 | 482325-58-6 | 482325-59-7 | 482325-60-0 |
| | 482325-61-1 | 482325-62-2 | 482325-63-3 | 482325-64-4 | 482325-65-5 |
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| | 482325-71-3 | 482325-72-4 | 482325-73-5 | 482325-74-6 | 482325-75-7 |
| | 482325-76-8 | 482325-77-9 | 482325-78-0 | 482325-79-1 | 482325-80-4 |
| | 482325-81-5 | 482325-82-6 | 482325-83-7 | 482325-84-8 | 482325-85-9 |
| | 482325-86-0 | 482325-87-1 | 482325-88-2 | 482325-89-3 | 482325-90-6 |
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| | 482325-96-2 | 482325-97-3 | 482326-00-1 | 482326-01-2 | 482326-04-5 |
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| | 482326-10-3 | 482326-11-4 | 482326-12-5 | 482326-13-6 | 482326-14-7 |

September 8, 2008

10/573,786

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482326-15-8 482326-16-9 482326-17-0 482326-18-1 482326-19-2
 482326-20-5 482326-21-6 482326-22-7 482326-23-8 482326-24-9
 483966-00-3

RL: BSU (Biological study, unclassified); THU (Therapeutic use);
 BIOL (Biological study); USES (Uses)
 (metal ion chelates in validating biol. mols. as drug targets in
 test animal models)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L23 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:23105 HCAPLUS Full-text

DOCUMENT NUMBER: 138:83328

TITLE: Metal ion binding-based chemical libraries
 useful for drug discovery processes

INVENTOR(S): Hoegberg, Thomas; Rist, Oystein; Hjelmencrantz,
 Anders; Moldt, Peter; Elling, Christian E.;
 Schwartz, Thue W.; Gerlach, Lars Ole; Holst
 Lange, Birgitte

PATENT ASSIGNEE(S): 7TM Pharma A/S, Den.

SOURCE: PCT Int. Appl., 242 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|------------|
| WO 2003003008 | A1 | 20030109 | WO 2002-DK455 | 20020628 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| AU 2002319117 | A1 | 20030303 | AU 2002-319117 | 20020628 |
| PRIORITY APPLN. INFO.: | | | DK 2001-1029 | A 20010629 |
| | | | DK 2001-1032 | A 20010629 |
| | | | DK 2001-1033 | A 20010629 |
| | | | DK 2001-1034 | A |

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DK 2001-1035

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US 2001-301989P

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US 2001-301990P

P

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WO 2002-DK455

W

200206
28

OTHER SOURCE(S): MARPAT 138:83328

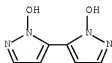
AB The invention discloses the use of chemical compds. or selections of chemical compds. (libraries) of the general formula $R_1XFY(R_1)GZR_1$ [F, G = N, O, S, Se, P; X, Y, Z = (un)branched C1-12 alkyl, (hetero)aryl, etc.; R1 = H, ABC; A = coupling or connecting moiety; B = spacer moiety; C = functional group] for in vivo methods for testing or validating the physiol. importance and/or the therapeutic or pharmacol. potential of biol. target mols., notably proteins such as, e.g., receptors and especially 7TM receptors in test animals expressing the biol. target mol. with, notably, a silent, engineered metal ion site. Use of specific metal ion binding sites of a generic nature in specific biol. target mols. such as, e.g. transmembrane proteins wherein the metal-ion binding site is capable of forming a complex with a metal ion is also described. The invention provides chemical compds. or libraries suitable for use in methods for improving the in vivo pharmacokinetic behavior of metal-ion chelates (e.g. the absorption pattern, the plasma half-life, the distribution, the metabolism and/or the elimination of the metal ion chelates). In order to improve the efficacy of the metal ion chelates impact on the biol. target mol. after administration of the metal ion chelate in vivo to a test animal, it is advantageous e.g. to increase the time period during which the metal ion chelate is in the circulatory system and/or localized at the target. Metal ion chelating compds., which are designed to be suitable for use in a target validation process according to the invention and to libraries of at least two or more of such metal-ion chelating compds. are disclosed.

IT 482324-60-7

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metal ion binding-based chemical libraries for drug discovery
processes)

RN 482324-60-7 HCAPLUS

CN 3,3'-Bipyrazole, 2,2'-dihydro-2,2'-dihydroxy- (CA INDEX NAME)



IC ICM G01N033-50

ICS C07D207-00; C07D209-00; C07D211-00; C07D213-00; C07D215-00;
C07D231-00; C07D233-00; C07D235-00; C07D241-00; C07D257-00

CC 1-1 (Pharmacology)
 Section cross-reference(s): 27, 28

IT 52-90-4, L-Cysteine, biological studies 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 60-18-4, L-Tyrosine, biological studies 63-68-3, L-Methionine, biological studies 66-71-7D, 1,10-Phenanthroline, derivs., copper and zinc complexes 70-47-3, L-Asparagine, biological studies 71-00-1, L-Histidine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 74-79-3, L-Arginine, biological studies 90-02-8, biological studies 94-67-7 148-24-3, 8-Quinololinol, biological studies 304-88-1 366-18-7D, 2,2'-Bipyridine, copper and zinc complexes 492-97-7, 2,2'-Bithiophene 495-18-1 496-74-2 607-28-3 694-83-7, 1,2-Cyclohexanediamine 779-84-0 886-08-8 1245-13-2 1262-69-7 1662-01-7 1748-89-6, [2,2'-Bipyridine]-4-carboxylic acid 1762-34-1 2706-56-1, 2-Pyridineethanamine 3002-78-6 3002-81-1 3117-65-5 3248-05-3 3265-24-5 3291-00-7 3731-51-9, 2-Pyridinemethanamine 4199-88-6 4199-89-7 4411-80-7 4433-01-6, [2,2'-Bipyridine]-3,3'-dicarboxylic acid 4733-39-5 5961-35-3 5961-36-4 6153-89-5D, zinc complexes 6153-92-0 7089-68-1 7275-43-6 15439-16-4, 1,4,8,12-Tetraazacyclopentadecane 19437-26-4 19535-47-8, Dipyrrolo[3,2-a:2',3'-c]phenazine 21911-90-0 23978-55-4 25700-14-5 27318-90-7D, 1,10-Phenanthroline-5,6-dione, zinc complexes 29726-21-4 31301-28-7 32382-63-1 33893-89-9 40386-51-4 50890-67-0 54258-41-2, 1,10-Phenanthroline-5-amine 56100-24-4 57709-61-2 62027-35-4 65312-43-8, Blood coagulation factor VIIa 69006-93-5, 1H-Benzimidazole-2-carboximidamide 72914-19-3D, zinc and copper complexes 75449-26-2, [2,2'-Bipyridine]-3,3'-diamine 77692-11-6D, copper complexes 78831-41-1D, zinc complexes 89972-77-0 94268-48-1 96897-04-0 99112-52-4 99970-84-0, [2,2'-Bipyridine]-4,4'-dicarboxaldehyde 105166-53-8, [2,2'-Bipyridine]-3-amine 105942-31-2D, copper complexes 107976-78-3 118724-25-7 123865-76-9D, zinc complexes 128143-89-5 146581-87-5, [2,2'-Bipyridine]-5-methanol 149762-81-2 157378-06-8 179873-48-4, [2,2'-Bipyridine]-5-carboxaldehyde 199282-55-8 219557-28-5 220339-96-8, [2,2'-Bipyridine]-5-methanamine 220340-46-5, [2,2'-Bipyridine]-3-carboxylic acid 294648-47-8, [2,2'-Bipyridine]-5-carboxamide 312603-96-6D, copper complexes 313550-33-3 318512-23-1 482323-17-1D, copper complexes 482323-18-2D, copper complexes 482323-19-3D, copper complexes 482323-20-6 482323-22-8 482323-23-9 482323-24-0, [2,2'-Bipyridine]-3-propanamine 482323-25-1 482323-26-2 482323-27-3 482323-28-4 482323-30-8 482323-31-9 482323-32-0 482323-33-1 482323-34-2 482323-35-3 482323-36-4 482323-37-5, [2,2'-Bipyridine]-3-ethanamine 482323-38-6 482323-39-7 482323-40-0 482323-41-1 482323-42-2 482323-43-3 482323-44-4 482323-45-5 482323-46-6 482323-47-7 482323-48-8 482323-49-9 482323-50-2 482323-51-3 482323-52-4 482323-53-5 482323-54-6 482323-55-7 482323-56-8 482323-57-9 482323-58-0 482323-59-1 482323-60-4 482323-61-5 482323-62-6 482323-63-7 482323-64-8 482323-65-9 482323-66-0 482323-67-1 482323-68-2 482323-69-3 482323-70-6 482323-71-7 482323-72-8 482323-73-9 482323-74-0 482323-75-1 482323-76-2 482323-77-3 482323-78-4 482323-79-5 482323-80-8 482323-81-9 482323-82-0 482323-83-1 482323-84-2 482323-85-3 482323-86-4 482323-87-5 482323-88-6 482323-89-7 482323-90-0 482323-91-1 482323-92-2 482323-93-3 482323-94-4 482323-95-5 482323-96-6 482323-97-7

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| 482323-98-8 | 482323-99-9 | 482324-00-5 | 482324-01-6 | 482324-02-7 |
| 482324-03-8 | 482324-04-9 | 482324-05-0 | 482324-06-1 | 482324-07-2 |
| 482324-08-3 | 482324-09-4 | 482324-10-7 | 482324-11-8 | 482324-12-9 |
| 482324-13-0 | 482324-14-1 | 482324-15-2 | 482324-16-3 | 482324-17-4 |
| 482324-18-5 | 482324-19-6 | 482324-20-9 | 482324-21-0 | 482324-22-1 |
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| 482324-33-4 | 482324-34-5 | 482324-35-6 | 482324-36-7 | 482324-37-8 |
| 482324-38-9 | 482324-39-0 | 482324-40-3 | 482324-41-4 | 482324-42-5 |
| 482324-43-6 | 482324-44-7 | 482324-45-8 | 482324-46-9 | 482324-47-0 |
| 482324-48-1 | 482324-49-2 | 482324-50-5 | 482324-51-6 | 482324-52-7 |
| 482324-53-8 | 482324-54-9 | 482324-55-0 | 482324-56-1 | 482324-57-2 |
| 482324-58-3 | 482324-59-4 | 482324-60-7 | | |

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metal ion binding-based chemical libraries for drug discovery processes)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:855864 HCAPLUS Full-text

DOCUMENT NUMBER: 139:214344

TITLE: Product class 1: pyrazoles

AUTHOR(S): Stanovnik, B.; Svete, J.

CORPORATE SOURCE: Faculty of Chemistry and Chemical Technology,
Division of Organic Chemistry, Ljubljana, 61000,
Slovenia

SOURCE: Science of Synthesis (2002), 12, 15-225

CODEN: SSCYJ9

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. Methods for preparing pyrazoles are reviewed including cyclization, ring transformation, aromatization and substituent modifications.

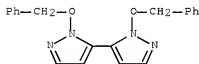
IT 217313-05-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of pyrazoles via cyclization, ring transformation, aromatization and substituent modifications)

RN 217313-05-8 HCAPLUS

CN 3,3'-Bipyrazole, 2,2'-dihydro-2,2'-bis(phenylmethoxy)- (CA INDEX NAME)



CC 28-0 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 127847-42-1P 127991-66-6P 128641-78-1P 129302-13-2P

129302-16-5P 129819-40-5P 130224-40-7P 130317-91-8P

130657-26-0P 130657-27-1P 130657-28-2P 130657-29-3P

130657-30-6P 130657-31-7P 130657-32-8P 130657-33-9P

130657-34-0P 130657-35-1P 131456-91-2P 132026-35-8P

132026-37-0P 132026-38-1P 132132-43-5P 132595-92-7P

132595-94-9P 134038-62-3P 134038-63-4P 134038-64-5P

134038-65-6P 134947-25-4P 135659-88-0P 135659-89-1P

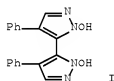
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| 138942-61-7P | 142231-66-1P | 142231-67-2P | 142395-82-2P |
| 142395-83-3P | 142809-80-1P | 142809-82-3P | 142809-86-7P |
| 142818-01-7P | 142818-02-8P | 142818-03-9P | 143426-49-7P |
| 143426-52-2P | 145162-47-6P | 155105-99-0P | 155106-01-7P |
| 155106-03-9P | 155106-04-0P | 155106-05-1P | 155688-68-9P |
| 155688-87-2P | 157950-99-7P | 157951-00-3P | 157951-01-4P |
| 157951-02-5P | 157951-03-6P | 157951-04-7P | 157951-05-8P |
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| 157951-10-5P | 157951-11-6P | 162468-74-8P | 162468-82-8P |
| 162468-83-9P | 168133-31-1P | 168976-22-5P | 168976-23-6P |
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| 168976-32-7P | 168976-33-8P | 168976-34-9P | 168976-35-0P |
| 168976-36-1P | 170167-56-3P | 170167-67-6P | 170167-68-7P |
| 170167-69-8P | 170167-70-1P | 170167-71-2P | 170167-72-3P |
| 170167-73-4P | 170960-26-6P | 170960-27-7P | 170960-28-8P |
| 170960-29-9P | 170960-30-2P | 170960-31-3P | 180207-57-2P, |
| 1H-Pyrazole-4-ethanol | 181185-05-7P | 181185-06-8P | 181185-07-9P |
| 181185-08-0P | 181185-09-1P | 182422-02-2P | 182422-03-3P |
| 182422-04-4P | 182422-05-5P | 182422-06-6P | 185542-19-2P |
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| 221551-51-5P | 221551-54-8P | 221551-57-1P | 222181-01-3P |
| 225220-78-0P | 225220-79-1P | 225220-80-4P | 225220-82-6P |
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| 237404-81-8P | 239809-34-8P | 240119-37-3P | 240119-57-7P |
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| 264121-39-3P | 264121-40-6P | 264121-41-7P | 302600-15-3P |
| 337956-44-2P | 342806-47-7P | 371772-77-9P | 387830-67-3P |
| 387830-68-4P | 512810-21-8P | 591233-66-8P | 591233-67-9P |
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| 591233-72-6P | 591233-73-7P | 591233-74-8P | 591233-75-9P |
| 591233-76-0P | 591233-80-6P | 591233-81-7P | 591233-82-8P |
| 591233-83-9P | 591233-84-0P | 591233-85-1P | 591233-86-2P |
| 591233-87-3P | 591233-89-5P | 591233-90-8P | 591233-91-9P |
| 591233-92-0P | 591233-93-1P | 591233-94-2P | 591233-95-3P |
| 591233-98-6P | 591234-01-4P | 591234-02-5P | |

RL: SPN (Synthetic preparation); PREP (Preparation)

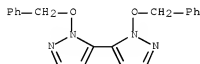
(preparation of pyrazoles via cyclization, ring transformation, aromatization and substituent modifications)

REFERENCE COUNT: 909 THERE ARE 909 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2001:478148 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 135:303812
TITLE: Synthesis of a new analog of BINOL based on a homodimer of substituted 1-hydroxypyrazole
AUTHOR(S): Rist, Oystein; Begtrup, Mikael
CORPORATE SOURCE: Department of Medicinal Chemistry, The Royal Danish School of Pharmacy, Copenhagen, DK-2100, Den.
SOURCE: Journal of the Chemical Society, Perkin Transactions 1 (2001), (13), 1566-1568
CODEN: JCSPCE; ISSN: 1472-7781
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:303812
GI



- AB A new potential ligand for asym. synthesis (I), based on a homodimer of 1-hydroxypyrazole, has been synthesized. The chemical involved lithiation, iodine-magnesium exchange, magnesium-zinc exchange, and cross-coupling reactions. In a preliminary study, the chemical activity of the ligand as a titanium(IV) complex was investigated in the addition of diethylzinc to benzaldehyde. Its activity was comparable to the corresponding BINOL-Ti(IV) complex.
- IT 217313-05-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(analog of BINOL based on homodimer of substituted
1-hydroxypyrazole)
- RN 217313-05-8 HCAPLUS
- CN 3,3'-Bipyrazole, 2,2'-dihydro-2,2'-bis(phenylmethoxy)- (CA INDEX NAME)



- CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 25
- IT 217313-05-8P 365562-80-7P 365562-82-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(analog of BINOL based on homodimer of substituted

1-hydroxypyrazole)
REFERENCE COUNT: 16

THERE ARE 16 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L23 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:742810 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 130:52365

TITLE: Preparation of 5-acyl- and 5-aryl-substituted
1-(benzyloxy)pyrazoles via directed
ortho-lithiation/transmetalation and
palladium-catalyzed cross-coupling

AUTHOR(S): Kristensen, Jesper; Begtrup, Mikael; Vedso, Per

CORPORATE SOURCE: Department Medicinal Chemistry, Royal Danish
School Pharmacy, Copenhagen, DK-2100, Den.

SOURCE: Synthesis (1998), (11), 1604-1608

CODEN: SYNTBF; ISSN: 0039-7881

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 130:52365

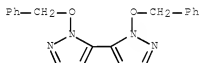
AB Pd(0)-catalyzed cross-coupling of 1-(benzyloxy)pyrazol-5-ylzinc halides,
prepared by transmetalation of 1-(benzyloxy)-5- lithiopyrazole, with acyl
chlorides produced 5-acyl-1- (benzyloxy)pyrazoles in high yields. Similar
coupling of the pyrazol-5-ylzinc halide with amino, hydroxy-, methoxy-,
fluoro-, nitro-, or formyl-substituted iodobenzene gave the corresponding 5-
aryl-1-(benzyloxy)pyrazoles, while coupling with iodothiophene, iodopyrazole,
or bromopyridine provided the corresponding 1-(benzyloxy)-5-
heteroarylpyrazoles.

IT 217313-05-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of acyl- and arylbenzoxypyrazoles via directed
ortho-lithiation/transmetalation and palladium-catalyzed
cross-coupling)

RN 217313-05-8 HCAPLUS

CN 3,3'-Bipyrazole, 2,2'-dihydro-2,2'-bis(phenylmethoxy)- (CA INDEX
NAME)



CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 217312-94-2P 217312-95-3P 217312-96-4P 217312-97-5P

217312-98-6P 217312-99-7P 217313-00-3P 217313-01-4P

217313-02-5P 217313-03-6P 217313-04-7P 217313-05-8P

217313-06-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

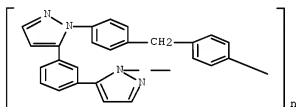
(preparation of acyl- and arylbenzoxypyrazoles via directed
ortho-lithiation/transmetalation and palladium-catalyzed
cross-coupling)

REFERENCE COUNT: 37

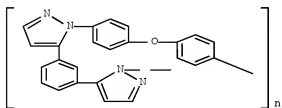
THERE ARE 37 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L23 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

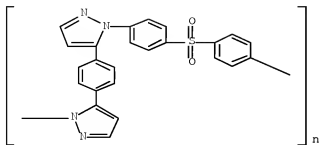
ACCESSION NUMBER: 1988:22368 HCAPLUS Full-text
 DOCUMENT NUMBER: 108:22368
 ORIGINAL REFERENCE NO.: 108:3809a,3812a
 TITLE: Polypyrazoles from aromatic dipropynones and aromatic dihydrazines
 AUTHOR(S): Connell, J. W.; Bass, R. G.; Sinsky, M. S.; Waldbauer, R. O.; Hergenrother, P. M.
 CORPORATE SOURCE: Dep. Chem., Virginia Commonw. Univ., Richmond, VA, 23284, USA
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1987), 25(9), 2531-42
 CODEN: JPACEC; ISSN: 0887-624X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Two types of polypyrazoles, unsubstituted and phenylated, were prepared by a synthetic route involving the cyclopropylcondensation of aromatic dihydrazines and aromatic dipropynones. The polymers had inherent viscosities ≤ 1.05 dL/g and were soluble in AcNMe₂, CHCl₃ (phenylated polypyrazoles only), and H₂SO₄. The polymers exhibited glass transition temps. ranging from 202 to 266° and polymer decomposition temps. (10% weight loss) as measured by thermogravimetric anal. of 400-500° in air and 465-512° in N.
 IT 112077-26-6P 112077-27-7P 112077-28-8P
 112077-29-9P 112077-30-2P 112077-31-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and characterization of)
 RN 112077-26-6 HCAPLUS
 CN Poly(1H-pyrazole-1,5-diyl-1,3-phenylene-1H-pyrazole-5,1-diyl-1,4-phenylenemethylene-1,4-phenylene) (9CI) (CA INDEX NAME)



RN 112077-27-7 HCAPLUS
 CN Poly(1H-pyrazole-1,5-diyl-1,3-phenylene-1H-pyrazole-5,1-diyl-1,4-phenylenemethoxy-1,4-phenylene) (9CI) (CA INDEX NAME)



RN 112077-28-8 HCAPLUS
 CN Poly(1H-pyrazole-1,5-diyl-1,3-phenylene-1H-pyrazole-5,1-diyl-1,4-phenylenesulfonyl-1,4-phenylene) (9CI) (CA INDEX NAME)

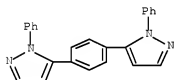


IT 112078-66-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as model for polypyrazoles)

RN 112078-66-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1-phenyl- (CA INDEX NAME)]



CC 35-5 (Chemistry of Synthetic High Polymers)

IT 112077-25-5P 112077-26-6P 112077-27-7P

112077-28-8P 112077-29-9P 112077-30-2P

112077-31-3P 112077-32-4P 112077-33-5P 112077-34-6P

112077-35-7P 112077-36-8P 112077-37-9P 112077-38-0P

112077-39-1P 112077-40-4P 112077-41-5P 112077-42-6P

112077-43-7P 112077-45-9P 112077-46-0P 112077-47-1P

112077-48-2P 112100-01-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and characterization of)

IT 6715-79-3P 112078-63-4P 112078-64-5P 112078-65-6P

112078-66-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as model for polypyrazoles)

L23 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1981:15633 HCAPLUS Full-text

DOCUMENT NUMBER: 94:15633

ORIGINAL REFERENCE NO.: 94:2615a,2618a

TITLE: Heterocyclopolyaromatics. X. The first
cyclohexa-aromatic compound with 'face-to-face'
arrangement of two aromatic ring members

AUTHOR(S): Lexy, Herbert; Kauffmann, Thomas

CORPORATE SOURCE: Org. Chem. Inst., Univ. Muenster, Muenster,
D-4400, Fed. Rep. Ger.

SOURCE: Chemische Berichte (1980), 113(8), 2749-54

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 94:15633

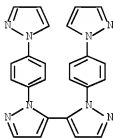
GI For diagram(s), see printed CA Issue.

AB The aromatic compound I was prepared in 43% yield by the oxidative coupling with CuCl₂ of the dilithiated compound II. The face-to-face arrangement of the benzene rings in I causes a distinct upfield shift of the NMR signals of the benzene protons.

IT 67673-47-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 67673-47-6 HCAPLUS

CN 5,5'-Bi-1H-pyrazole, 1,1'-bis[4-(1H-pyrazol-1-yl)phenyl]- (9CI) (CA INDEX NAME)



CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 67673-45-4P 67673-47-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L23 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:586318 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 93:186318

ORIGINAL REFERENCE NO.: 93:29703a,29706a

TITLE: Heterocyclopolyaromatics. XI. Synthesis, lithiation, and oxidative coupling of 1,3,5-tris(1-pyrazolyl)benzene

AUTHOR(S): Lexy, Herbert; Kauffmann, Thomas

CORPORATE SOURCE: Org. Chem. Inst., Univ. Muenster, Muenster, D-4400, Fed. Rep. Ger.

SOURCE: Chemische Berichte (1980), 113(8), 2755-9

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 93:186318

GI For diagram(s), see printed CA Issue.

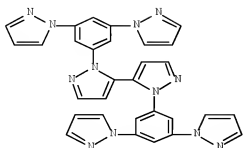
AB The title compound (I, R = H), prepared in 90% yield from 1,3,5-Br₃C₆H₃ and pyrazole, was quant. monolithiated on the benzene ring with 1 mol BuLi to give II. Oxidative coupling of the pentalithiated compound I (R = Li) with O₂ gave 3.5% a disubstituted cyclohexaarene compound III, with face-to-face arrangement of 2 benzene rings besides 8% the dehydro dimer IV (R₁ = 1-pyrazolyl).

IT 75307-80-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 75307-80-1 HCAPLUS

CN 5,5'-Bi-1H-pyrazole, 1,1'-bis(3,5-di-1H-pyrazol-1-ylphenyl)- (9CI)
(CA INDEX NAME)



CC 28-25 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 75307-80-1F 75307-81-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L23 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:33203 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 90:33203

ORIGINAL REFERENCE NO.: 90:5239a,5242a

TITLE: Thermal and spectral studies of some divalent metal chelate polymers of 2,6-diaminopimelic acid, 4,4'-diamino-3,3'-dicarboxybiphenyl, croconic acid, 2,4-dinitroso-1,3-naphthalenediol, N,N'-dihydroxybiprazolyl N,N'-oxide, and quinizarin

AUTHOR(S): Lusardi, Daniel Anthony

CORPORATE SOURCE: Univ. Notre Dame, Notre Dame, IN, USA

SOURCE: (1978) 145 pp. Avail.: Univ. Microfilms Int., Order No. 7815545

From: Diss. Abstr. Int. B 1978, 39(3), 1276

Dissertation

DOCUMENT TYPE:

LANGUAGE: English

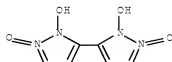
AB Unavailable

IT 68825-75-2D, transition metal polymeric chelates

RL: RCT (Reactant); RACT (Reactant or reagent)
(thermal and spectral properties of)

RN 68825-75-2 HCAPLUS

CN 5,5'-Bi-1H-pyrazole, 1,1'-dihydroxy-, 2,2'-dioxide (9CI) (CA INDEX NAME)



CC 78-7 (Inorganic Chemicals and Reactions)

IT 81-64-1D, transition metal polymeric chelates 488-86-8D,
transition metal polymeric chelates 583-93-7D, transition metal
polymeric chelates 2130-56-5D, transition metal polymeric chelates
30436-87-4D, transition metal polymeric chelates 68825-75-2D

, transition metal polymeric chelates

RL: RCT (Reactant); RACT (Reactant or reagent)
(thermal and spectral properties of)

L23 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1978:615385 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 89:215385

ORIGINAL REFERENCE NO.: 89:33473a,33476a

TITLE: A heterocyclohexa aromatic compound with
"face-to-face" arrangement of two benzene rings
AUTHOR(S): Kauffmann, Thomas; Lexy, Herbert
CORPORATE SOURCE: Org.-Chem. Inst., Univ. Muenster, Muenster, Fed.
Rep. Ger.

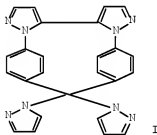
SOURCE: Angewandte Chemie (1978), 90(10), 804-5

CODEN: ANCEAD; ISSN: 0044-8249

DOCUMENT TYPE: Journal

LANGUAGE: German

GI



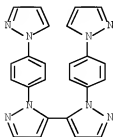
AB The macrocycle I was obtained together with 1,1'-bis(4-pyrazol-1-ylphenyl)-2,2'-bipyrazole by treating p-Br₂C₆H₄ with pyrazole, lithiating 1,4-dipyrazolobenzene with BuLi in THF 20°, and protonolysis of the di-Li derivative with CuCl₂ at -70°.

IT 67673-47-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 67673-47-6 HCAPLUS

CN 5,5'-Bi-1H-pyrazole, 1,1'-bis[4-(1H-pyrazol-1-yl)phenyl]- (9CI) (CA INDEX NAME)

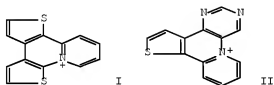


CC 28-25 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 67673-46-5P 67673-47-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L23 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1977:438304 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 87:38304
 ORIGINAL REFERENCE NO.: 87:6043a,6046a
 TITLE: Protophanes and polyaromatics. 24. Elimination of aromatic groups in the mass spectrometrically determined tetraheteroarenes
 AUTHOR(S): Kauffmann, Thomas; Mitschker, Alfred
 CORPORATE SOURCE: Org. Chem. Inst., Univ. Muenster, Muenster, Fed. Rep. Ger.
 SOURCE: Tetrahedron Letters (1977), (4), 393-6
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 GI



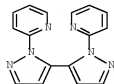
AB The mass spectra of tetraheteroarom. compds., in which both central nuclei are ortho substituted, shows that either of the peripheral nuclei can be eliminated and that this elimination leads by cyclization to a condensed cationic system. E.g., 2,2'-di-(2-pyridyl)-3,3'-bithienyl gives I. Similarly, ortho linked triheteroarom. compds. show strong (M+1) peaks and also give condensed cationic systems. E.g., 2-(2-pyridyl)-3-(4-pyrimidinyl)-thiophene gives II. In compds. such as 1,1'-di-(2-pyridyl)-2,2'-biimidazolyl, in which C-N bonding exists, relatively weak (M+1), (M+Ar), and (M+HCN) peaks occur. In tetraheteroarom. compds. where it is possible to cleave atom groups from both middle and peripheral parts of the mol., the cleavage occurs by a concerted process.

IT 39242-22-3

RL: PRP (Properties)
 (mass spectrum of)

RN 39242-22-3 HCAPLUS

CN Pyridine, 2,2'-[5,5'-bi-1H-pyrazole]-1,1'-diylbis- (9CI) (CA INDEX NAME)



CC 22-2 (Physical Organic Chemistry)

| | | | | | |
|----|------------|------------|------------|------------|------------|
| IT | 35046-51-6 | 35299-68-4 | 35299-69-5 | 39242-21-2 | 39242-22-3 |
| | 39242-23-4 | 51459-69-9 | 51459-70-2 | 54028-59-0 | 54028-60-3 |
| | 54072-04-7 | 56598-47-1 | 63283-00-1 | 63283-01-2 | 63283-02-3 |

63283-03-4 63283-04-5 63283-05-6 63283-06-7 63283-07-8
63283-08-9 63283-09-0 63283-10-3 63283-11-4 63283-12-5
RL: PRP (Properties)
(mass spectrum of)

L23 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1973:124495 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 78:124495

ORIGINAL REFERENCE NO.: 78:20003a,20006a

TITLE: Pyrazoles. XI Synthesis of
1,1'-dimethylbipyrzolyls

AUTHOR(S): Timmermans, Pieter B. M. W.; Uijtewaal,
Arnold P.; Habraken, Clarisse L.

CORPORATE SOURCE: Gorlaeus Lab., Univ. Leiden, Leiden, Neth.
SOURCE: Journal of Heterocyclic Chemistry (1972), 9(6),
1373-8

CODEN: JHTCAD; ISSN: 0022-152X

DOCUMENT TYPE: Journal

LANGUAGE: English

GI For diagram(s), see printed CA Issue.

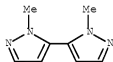
AB All six isomers of 1,1'-dimethylbipyrzolylyl (I-IV) were prepared. The
structure assignments were based on NMR data. NMR spectra were determined in
widely different solvents and structure assignments were based on these data.
Uv spectral data are also reported.

IT 29801-05-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 29801-05-6 HCAPLUS

CN 5,5'-Bi-1H-pyrazole, 1,1'-dimethyl- (9CI) (CA INDEX NAME)



CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 29801-05-6P

29801-06-7P

37687-18-6P

40534-33-6P

40534-35-8P

40534-36-9P

40534-37-0P

40534-38-1P

40534-39-2P

40534-40-5P 40869-42-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L23 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1972:552071 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 77:152071

ORIGINAL REFERENCE NO.: 77:25003a,25006a

TITLE: Protophanes and polyarenes. 9. Synthesis and
properties of azole-pyridine combinations.
Problem of the hydrolytic cleavage of hetarene
combinations

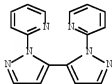
AUTHOR(S): Kauffmann, Thomas; Legler, Jochen; Ludorff,
Elisabeth; Fischer, Heinz

CORPORATE SOURCE: Org.-Chem. Inst., Univ. Muenster, Muenster, Fed.
Rep. Ger.

SOURCE: Angewandte Chemie, International Edition in
English (1972), 11(9), 846-7

CODEN: ACIEAY; ISSN: 0570-0833

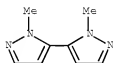
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Diarenes I (Y = CH, Z = N, 83%; Y = N, Z = CH, 60%; Y = Z = N, 61%) were prepared by treating 2-chloropyridine with the corresponding 5-membered ring lithium derivative in an autoclave. I resisted alkaline hydrolysis but reacted with BuLi to give II, which on oxidative coupling gave III. Triarenes, IV, were prepared in a similar method using 2,6-dichloropyridine and also resisted alkaline hydrolysis. The resistance to hydrolysis is attributed to the inability of the pyridine system, unlike the corresponding carbonyl group in amides, to add weak nucleophiles. Oligoarenes containing >4 heterocycles were prepared in an autoclave using 2-chloro-2-(2-thienyl)pyridine, BuLi, and CuCl₂.
IT 39242-22-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 39242-22-3 HCAPLUS
CN Pyridine, 2,2'-[5,5'-bi-1H-pyrazole]-1,1'-diylbis- (9CI) (CA INDEX NAME)



CC 28-11 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 22
IT 39242-19-8P 39242-20-1P 39242-21-2P 39242-22-3P
39242-23-4P 39242-24-5P 39242-25-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
L23 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1970:498180 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 73:98180
ORIGINAL REFERENCE NO.: 73:16019a,16022a
TITLE: Reactions between azolium salts and nucleophilic reagents. III. Base-catalyzed interhalogenation and cine-substitution of bromo-pyrazolium salts with formation of 1,2-dimethyl-pyrazol-4-in-3-ones
AUTHOR(S): Begtrup, Mikael
CORPORATE SOURCE: Dep. Org. Chem., Tech. Univ. Denmark, Lyngby, Den.
SOURCE: Acta Chemica Scandinavica (1947-1973) (1970), 24(5), 1819-35
CODEN: ACSAA4; ISSN: 0001-5393
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 1,2-Dimethyl-3,4-dibromopyrazolium tosylate (I) in basic solution reacts to give 1,2-dimethyl-3,4,5-tribromopyrazolium tosylate (II), and 1,2-dimethyl-4-bromopyrazolium tosylate (III) as primary products. I and II yield 1,2-dimethyl-4-bromo-4-pyrazolin-3-one and its 5-bromo derivative via nucleophilic attack by hydroxide ion. III or its 3-Me derivative react with N NaOH or

NaOMe at 190° with cine-substitution to give the resp. 1,2-dimethyl-4-pyrazolin-3-ones. cine-Substitution to a minor extent follows an interhalogenation route and to a major extent follows an intrahalogenation route and (or) an AEa-mechanism.

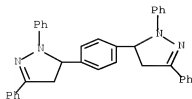
IT 29301-05-6
 RL: PRP (Properties)
 (nuclear magnetic resonance of)
 RN 29801-05-6 HCAPLUS
 CN 5,5'-Bi-1H-pyrazole, 1,1'-dimethyl- (9CI) (CA INDEX NAME)



CC 22 (Physical Organic Chemistry)
 IT 3201-26-1 3514-11-2 29801-01-2 29801-02-3 29801-04-5
 29801-05-6 29801-06-7
 RL: PRP (Properties)
 (nuclear magnetic resonance of)

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L16 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:1295901 HCAPLUS Full-text
 DOCUMENT NUMBER: 147:175623
 TITLE: Intramolecular charge transfer in arylpyrazolines
 AUTHOR(S): Wang, Ming-Liang; Liu, Ju-Zheng; Xu, Chun-Xiang
 CORPORATE SOURCE: Department of Chemistry and Chemical Engineering, Southeast University, Nanjing, 210096, Peop. Rep. China
 SOURCE: Chinese Physics Letters (2006), 23(11), 3088-3090
 CODEN: CPLEEU; ISSN: 0256-307X
 PUBLISHER: Chinese Physical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Arylpyrazoline microparticles dispersed in water are synthesized and their absorption spectra are compared with those in solution. It is found that the absorbance of pyrazoline group in solution of 5-aryl arylpyrazoline is far greater than that in solution of arylpyrazolines with no 5-aryl group. This hyperchromic effect is intensified in 5-aryl arylpyrazoline microparticles. It is indicated that intramol. charge transfer exists between pyrazoline group and 5-aryl group and this kind of interaction is increased in their microparticles.
 IT 34135-42-7
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (intramol. charge transfer in arylpyrazolines)
 RN 34135-42-7 HCAPLUS
 CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA INDEX NAME)]



CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 2538-52-5, 1,3-Diphenyl-2-pyrazoline 3314-41-8 21515-26-4
34135-42-7

RL: PEP (Physical, engineering or chemical process); PRP
(Properties); PROC (Process)
(intramol. charge transfer in arylpyrazolines)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L16 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1240244 HCAPLUS Full-text

DOCUMENT NUMBER: 144:7763

TITLE: Fluorescent bispyrazolines with good heat
resistance, and polyimide or polycarbonate
laminates using them

INVENTOR(S): Koshigaya, Takeshi

PATENT ASSIGNEE(S): Nippon Chemical Works Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

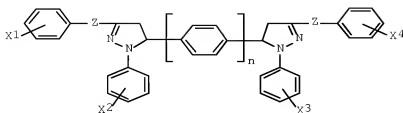
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

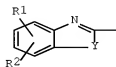
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|--------------|
| ----- | ---- | ----- | ----- | ----- |
| JP 2005325030 | A | 20051124 | JP 2004-142143 | 200405 12 |
| PRIORITY APPLN. INFO.: | | | JP 2004-142143 | 200405 12 |

OTHER SOURCE(S): MARPAT 144:7763

GI



I



II

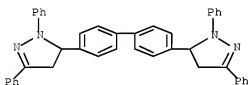
AB The bispyrazolines I [X1-X4 = H, C1-8 alkyl, C1-8 alkoxy, NH2, C1-8 alkylamino, dialkylamino, II; R1, R2 = H, C1-8 alkyl; Y = O, S, NR3R4; R3, R4 = H, C1-3 alkyl; Z = direct bond, (CH2)m; m = 0, 1; n = 0-2] absorb light from UV to a low-wavelength visible light region. Thus, N-methylpyrrolidone solution containing pyromellitic dianhydride-3,3',4,4'-benzophenonetetracarboxylic dianhydride-6-amino-2-(p-aminophenyl) benzimidazole copolymer polyamic acid and 4,4'-bis(1,3-diphenyl-2-pyrazolin-5-yl)biphenyl was cast on a Cu plate, dried at 140°, and heated at 350° to give a laminate showing high fluorescence intensity.

IT 649071-65-4

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(fluorescent bispyrazolines with good heat resistance for polyimide or polycarbonate laminates)

RN 849071-65-4 HCAPLUS

CN 1H-Pyrazole, 5,5'-[1,1'-biphenyl]-4,4'-diylbis[4,5-dihydro-1,3-diphenyl- (9CI) (CA INDEX NAME)



IC ICM C07D231-12

ICS B32B015-08; C08K005-3445; C08K005-353; C08K005-46; C08L069-00; C08L079-08

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 28, 73

IT 649071-65-4 869862-11-3 869862-12-4

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(fluorescent bispyrazolines with good heat resistance for polyimide or polycarbonate laminates)

L16 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:300556 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 142:363448

TITLE: Organic electroluminescent device showing excellent luminous efficiency and driving stability

INVENTOR(S): Yoshitake, Osamu; Miyazaki, Hiroshi; Suzuki, Daisuke; Yamada, Yu

PATENT ASSIGNEE(S): Nippon Steel Chemical Co., Ltd., Japan; Japan Hydrazine Co., Inc.

SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2

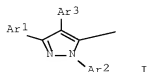
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-------------------|------------|
| WO 2005030901 | A1 | 20050407 | WO 2004-JP13752 | 20040921 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CN 1860201 | A | 20061108 | CN 2004-80028206 | 20040921 |
| US 20070012935 | A1 | 20070118 | US 2006-573786 | 20060628 |
| PRIORITY APPLN. INFO.: | | | JP 2003-338081 | A 20030929 |
| | | | WO 2004-JP13752 | W 20040921 |
| OTHER SOURCE(S): | | | MARPAT 142:363448 | |
| GI | | | | |



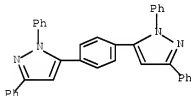
AB An organic electroluminescent device (organic EL device) utilizing phosphorescence is disclosed which has excellent luminous efficiency that enables high luminance at low c.d. and high driving stability. Such an organic electroluminescent device is applicable to display devices such as a flat panel display or illuminating devices. An organic electroluminescent device comprising an anode, an organic layer and a cathode formed in layers on a substrate is characterized in that at least one layer in the organic layer is a light-emitting layer containing a host material and a dopant material and a pyrazole compound having 2-4 pyrazole structures represented by the formula I (Ar1-3 = H, aromatic hydrocarbonyl) in a same mol. is used as the host material in the light-emitting layer.

IT 6715-79-3P 849071-64-3F 849071-66-5P
849071-69-8P 849071-72-3P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of pyrazole compound for organic electroluminescent device showing excellent luminous efficiency and driving stability)

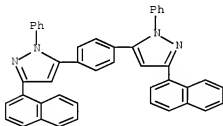
RN 6715-79-3 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1,3-diphenyl- (CA INDEX NAME)



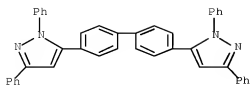
RN 849071-64-3 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[3-(1-naphthalenyl)-1-phenyl- (CA INDEX NAME)



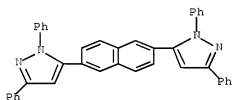
RN 849071-66-5 HCAPLUS

CN 1H-Pyrazole, 5,5'-[1,1'-biphenyl]-4,4'-diylbis[1,3-diphenyl- (9CI)
(CA INDEX NAME)



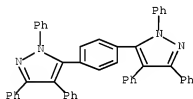
RN 849071-69-8 HCAPLUS

CN 1H-Pyrazole, 5,5'-(2,6-naphthalenediyl)bis[1,3-diphenyl- (CA INDEX NAME)



RN 849071-72-3 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1,3,4-triphenyl- (CA INDEX NAME)



IT 34135-42-7P 264602-31-5P 849071-65-4P

849071-68-7P 649071-71-2P

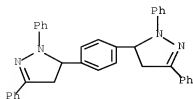
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(preparation of pyrazole compound for organic electroluminescent device showing excellent luminous efficiency and driving stability)

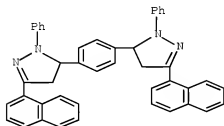
RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA INDEX NAME)



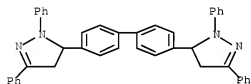
RN 264602-31-5 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-3-(1-naphthalenyl)-1-phenyl- (CA INDEX NAME)]



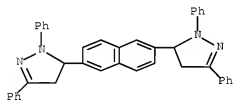
RN 849071-65-4 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,1'-biphenyl)-4,4'-diylbis[4,5-dihydro-1,3-diphenyl- (9CI) (CA INDEX NAME)]



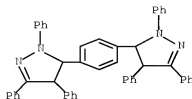
RN 849071-68-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(2,6-naphthalenediyl)bis[4,5-dihydro-1,3-diphenyl- (CA INDEX NAME)]



RN 849071-71-2 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3,4-triphenyl- (CA INDEX NAME)]

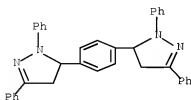


IC ICM C09K011-06
ICS H05B033-14
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74
IT 6715-79-3P 849071-64-3P 849071-66-5P
849071-69-8P 849071-72-3P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of pyrazole compound for organic electroluminescent device showing excellent luminous efficiency and driving stability)
IT 66-98-8P, [1,1'-Biphenyl]-4,4'-dicarboxaldehyde 3251-38-5P
5060-65-1P, 2,6-Naphthalenedicarboxaldehyde 34135-42-7P
79422-39-2P 261602-31-5P 384807-29-8P
849071-65-4P 849071-67-6P 849071-68-7P
849071-70-1P 849071-71-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of pyrazole compound for organic electroluminescent device showing excellent luminous efficiency and driving stability)
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:764227 HCAPLUS Full-text
DOCUMENT NUMBER: 141:372202
TITLE: Study on fluorescence spectra of four kinds of pyrazoline dimers
AUTHOR(S): Liao, Xian-wei; Su, Yu; Wang, Ying; Zhao, Ying; Wu, Xue-mei; Liang, Xiao-qin
CORPORATE SOURCE: College of Chemistry and Life Science, Sichuan Normal University, Chengdu, 610066, Peop. Rep. China
SOURCE: Guangpuxue Yu Guangpu Fenxi (2004), 24(8), 966-969
CODEN: GYG FED; ISSN: 1000-0593
PUBLISHER: Beijing Daxue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The fluorescence of four kinds of pyrazoline dimers have been studied. Their geometric configurations have been optimized by semi-empirical method RHF/AM1 of quantum chemical. There is no imaginary frequency in vibrational anal. Their fluorescence spectra have also been calculated by RHF/CIS. The results of the calcn. are essentially consistent with the exptl. values.
IT 34135-42-7 264602-31-5
RL: PRP (Properties)
(fluorescence of four kinds of pyrazoline dimers)

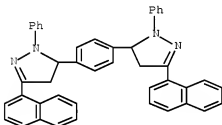
RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA INDEX NAME)



RN 264602-31-5 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-3-(1-naphthalenyl)-1-phenyl- (CA INDEX NAME)



CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 22

IT 7267-75-6 34135-42-7 264602-31-5 264602-32-6

RL: PRP (Properties)

(fluorescence of four kinds of pyrazoline dimers)

L16 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:638079 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 133:315164

TITLE: Photoluminescence and electroluminescence of pyrazoline monomers and dimers

AUTHOR(S): Zhang, Xiao-Hong; Wu, Shi-Kang; Gao, Zhi-Qiang; Lee, Zhen-Sheng; Lee, Shu-Tang

CORPORATE SOURCE: Institute of Photographic Chemistry, Chinese Academy of Sciences, Beijing, 100101, Peop. Rep. China

SOURCE: Gaodeng Xuexiao Huaxue Xuebao (2000), 21(8), 1278-1282

CODEN: KTHPDM; ISSN: 0251-0790

PUBLISHER: Gaodeng Jiaoyu Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The luminescence behavior of 7 kinds of pyrazoline monomer and dimer in solution and film was studied comparatively. The electroluminescence properties of the material containing dopant in EL device, in which the structure [ITO/TPD/TPBI:EP/TPBI/Mg:Ag] was employed, also were studied. The results indicated that the EL devices composed of pyrazoline compds. showed

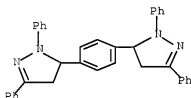
itself a very good ability on the electroluminescence, especially, of the pyrazoline compound in which a 5-position substitution existed. The devices obtained showed good stability due to their excellent film formation and high Tg transition temperature of the compds. used. The fluorescence quantum yields of mono-pyrazoline compds. in solution were higher than that of pyrazoline dimer. The identical tendency in the emission intensity was observed when the EL devices were composed of them.

IT 34135-42-7 264602-31-5

RL: PEP (Physical, engineering or chemical process); PRP
(Properties); PROC (Process)
(luminescence and electroluminescence of)

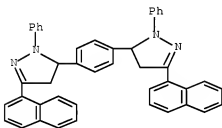
RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



RN 264602-31-5 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-3-(1-naphthalenyl)-
1-phenyl- (CA INDEX NAME)



CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)

Section cross-reference(s): 22, 76

IT 742-01-8, 1,3,5-Triphenylpyrazoline 2515-49-3,
3-(1'-Naphthyl)-1,5-diphenylpyrazoline 2538-52-5,
1,3-Diphenylpyrazoline 7267-75-6 34135-42-7
264602-31-5 264602-32-6

RL: PEP (Physical, engineering or chemical process); PRP
(Properties); PROC (Process)
(luminescence and electroluminescence of)

L16 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

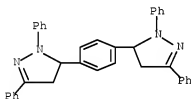
ACCESSION NUMBER: 2000:224323 HCAPLUS Full-text

DOCUMENT NUMBER: 132:300355

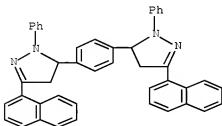
TITLE: Photoluminescence and electroluminescence of
pyrazoline monomers and dimers

AUTHOR(S): Zhang, X. H.; Lai, W. Y.; Gao, Z. Q.; Wong, T.

C.; Lee, C. S.; Kwong, H. L.; Lee, S. T.; Wu, S. K.
 CORPORATE SOURCE: Center of Super-Diamond and Advanced Films (COSDAF) and Department of Physics and Material Science, City University of Hong Kong, Kowloon, Hong Kong, Peop. Rep. China
 SOURCE: Chemical Physics Letters (2000), 320(1,2), 77-80
 CODEN: CHPLBC; ISSN: 0009-2614
 PUBLISHER: Elsevier Science B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The luminescence (PL) and the electroluminescence (EL) behaviors of 6 derivs. of the pyrazoline dimer and monomer were studied. The pyrazoline compds. with an aryl group attached to the 5-position of the pyrazoline ring have better film-forming property. Dimerization of the pyrazoline derivs. can improve the film-forming property while decrease the fluorescence yield. When these compds. were used in EL devices as fluorescence dopants in an N-arylbenzimidazoles trimer (TPBI), high efficiency EL was observed
 IT 34135-42-7 264602-31-5
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process) (luminescence and electroluminescence of)
 RN 34135-42-7 HCAPLUS
 CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA INDEX NAME)]



RN 264602-31-5 HCAPLUS
 CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-3-(1-naphthalenyl)-1-phenyl- (CA INDEX NAME)]



CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 22
 IT 742-01-8, 1,3,5-Triphenyl-2-pyrazoline 2515-49-3 7267-75-6
 34135-42-7 65181-78-4, TPD 192198-85-9
 264602-31-5 264602-32-6

RL: PEP (Physical, engineering or chemical process); PRP
(Properties); PROC (Process)
(luminescence and electroluminescence of)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L16 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:806394 HCAPLUS Full-text

DOCUMENT NUMBER: 132:129399

TITLE: Design of conjugated molecular materials for
optoelectronics

AUTHOR(S): Sano, Takeshi; Nishio, Yoshitaka; Hamada, Yuji;
Takahashi, Hisakazu; Usuki, Tatsuro; Shibata,
Kenichi

CORPORATE SOURCE: New Materials Research Center, Sanyo Electric
Co., Ltd., Hirakata-City, Osaka, 573-8534, Japan

SOURCE: Journal of Materials Chemistry (2000), 10(1),
157-161

CODEN: JMACEP; ISSN: 0959-9428

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

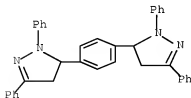
AB Fluorescent metal complexes and dimers were synthesized and used for organic
light-emitting diodes. The metal complexes with conjugated mol. ligands have
strong luminescence, showed bright emission of over 10,000 cd m⁻² in bilayer
electroluminescent (EL) cells. The EL cell structure was [transparent
anode/hole-transport layer/emitting layer/cathode]. The newly synthesized
pyrazoline dimers are highly fluorescent, and they have hole-transport
tendency. Another type of structure [transparent anode/emitting
layer/electron-transport layer/cathode] was applied to get emission from the
pyrazoline derivs. As a result, 1 pyrazoline derivative showed bright blue EL
of 1700 cd m⁻² at the maximum when it was combined with an oxadiazole
electron-transport material.

IT 34135-42-7, 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-
1,3-diphenyl-

RL: DEV (Device component use); PEP (Physical, engineering or
chemical process); PRP (Properties); PROC (Process); USES (Uses)
(for optoelectronics)

RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)

Section cross-reference(s): 76

IT 7267-75-6, 1H-Pyrazole, 3,3'-(1,4-phenylene)bis[4,5-dihydro-1,5-
diphenyl- 13978-85-3, Bis(8-hydroxyquinolino)zinc 14896-12-9,

Bis(N-methylsalicylideneamino)zinc 15276-55-8,
 Bis(8-hydroxyquinolinato)beryllium 16756-03-9,
 (N,N'-Disalicylidenehexane-1,6-aminato)zinc 17904-86-8,
 (1,10-Phenanthroline)tris(4,4,4-trifluoro-1-(2-thienyl)-1,3-
 butanedionato)europium 34135-42-7, 1H-Pyrazole,
 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- 58280-31-2
 138372-67-5 148896-39-3, Bis(10-hydroxybenzo[h]quinolinato)berylli
 um

RL: DEV (Device component use); PEP (Physical, engineering or
 chemical process); PRP (Properties); PROC (Process); USES (Uses)
 (for optoelectronics)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L16 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:559050 HCAPLUS Full-text
 DOCUMENT NUMBER: 129:149372
 ORIGINAL REFERENCE NO.: 129:30451a,30454a
 TITLE: Photocurable polymers for injecting holes for
 use in visualization
 INVENTOR(S): Le Barny, Pierre; Soyer, Francois; Facoetti,
 Hugues
 PATENT ASSIGNEE(S): Thomson CSF S. A., Fr.
 SOURCE: Fr. Demande, 26 pp.
 CODEN: FRXXBL
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|-------------------|
| FR 2757525 | A1 | 19980626 | FR 1996-15936 | 199612 24 |
| FR 2757525 | B1 | 19990326 | | |
| EP 850960 | A1 | 19980701 | EP 1997-403094 | 199712 19 |
| EP 850960 | B1 | 20030507 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 10195131 | A | 19980728 | JP 1997-355165 | 199712 24 |
| PRIORITY APPLN. INFO.: | | | FR 1996-15936 | A 199612 24 |

AB The title polymers, especially useful for injecting holes into
 photoluminescent materials, have backbones of acrylic polymers, polystyrene,
 or polyethylene; aromatic diamines or carbazole or pyrazoline derivs. of
 specified structure as hole-injecting groups; and cinnamic or furylacrylic
 acid groups as crosslinking sites. AIBN-initiated polymerization of 1.5 g N-
 vinylcarbazole with 0.131 g 4-(chloromethyl)styrene in PhMe at 65° gave a
 copolymer which was heated (0.5 g) with 0.181 g furylacrylic acid in DMPU
 containing 0.2 g DBU at 50° for 8 h to give a furylacrylated copolymer (1).

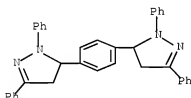
Exposing a film of I to a fluorescent lamp (power d. 1.5 mW/cm²) for 10 min rendered the film insol. in trichloroethane.

IT 34135-42-7D, derivs., polymers

RL: TEM (Technical or engineered material use); USES (Uses)
(photocurable polymers for injecting holes for use in
visualization)

RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



IC ICM C08F008-30

ICS C08F010-02; C08F012-08; C08F020-18; C08J003-24; C09K011-06;
H05B033-14

CC 35-4 (Chemistry of Synthetic High Polymers)

IT 621-82-9D, Cinnamic acid, polymer derivs. 9002-88-4D, derivs.

34135-42-7D, derivs., polymers

RL: TEM (Technical or engineered material use); USES (Uses)
(photocurable polymers for injecting holes for use in
visualization)

L16 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:665624 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 123:97237

ORIGINAL REFERENCE NO.: 123:17091a,17094a

TITLE: Pyrazoline dimers for hole transport materials
in organic electroluminescent devices
AUTHOR(S): Sano, Takeshi; Fujii, Takanori; Nishio,
Yoshitaka; Hamada, Yuji; Shibata, Kenichi;
Kuroki, Kazuhiko

CORPORATE SOURCE: New Materials Research Center, SANYO Electric
Co., Osaka, 573, Japan

SOURCE: Japanese Journal of Applied Physics, Part 1:
Regular Papers, Short Notes & Review Papers
(1995), 34(6A), 3124-7

CODEN: JAPNDE; ISSN: 0021-4922

PUBLISHER: Japanese Journal of Applied Physics

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Dimer structures of pyrazoline derivs. were synthesized to obtain stable films
and applied to electroluminescent (EL) devices as hole transport material. A
device structure of [indium-Sn-oxide (ITO)/hole transport layer (HTL)/emitting
layer (EML)/MgIn] was employed. When pyrazoline dimer (PYR-D3) and tris(8-
hydroxyquinolate)aluminum (Alq3) were used as HTL and EML, resp., the EL
device showed a maximum luminance of 12400 cd/m² at 11 V and a maximum
luminous efficiency of 1.5 lm/W at 250 cd/m². Pyrazoline dimers functioned
well as hole transport layers.

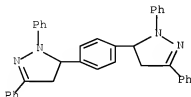
IT 34135-42-7

RL: DEV (Device component use); USES (Uses)

(pyrazoline dimers for hole transport materials in organic electroluminescent devices)

RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA INDEX NAME)



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 2085-33-8, Hydroxyquinoline aluminum 7267-75-6 20739-83-7
34135-42-7 50926-11-9, ITO

RL: DEV (Device component use); USES (Uses)
(pyrazoline dimers for hole transport materials in organic electroluminescent devices)

L16 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:558643 HCAPLUS Full-text

DOCUMENT NUMBER: 122:302617

ORIGINAL REFERENCE NO.: 122:54865a,54868a

TITLE: Organic field-effect electroluminescent device

INVENTOR(S): Nishio, Yoshitaka; Sano, Kenji; Fujita, Masayuki; Fujii, Takanori; Hamada, Juji; Shibata, Kenichi

PATENT ASSIGNEE(S): Sanyo Electric Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

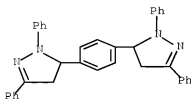
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| JP 07065956 | A | 19950310 | JP 1993-213167 | 19930827 |
| JP 3244359 | B2 | 20020107 | | |
| PRIORITY APPLN. INFO.: | | | JP 1993-213167 | 19930827 |

AB The device has an organic carrier-transporting layer and an organic light-emitting layer containing conjugated pyrazolines between a hole-injecting electrode and an electron-injecting electrode. The device showed high luminance and durability.

IT 34135-42-7

RL: DEV (Device component use); USES (Uses)
(high-luminance field-effect electroluminescent device having

conjugated pyrazoline light-emitting layer)
RN 34135-42-7 HCAPLUS
CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



IC ICM H05B033-14
ICS C09K011-06
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 28
IT 7267-75-6 20739-83-7 34135-42-7 54554-44-8
RL: DEV (Device component use); USES (Uses)
(high-luminance field-effect electroluminescent device having conjugated pyrazoline light-emitting layer)

L16 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1988:22368 HCAPLUS Full-text

DOCUMENT NUMBER: 108:22368

ORIGINAL REFERENCE NO.: 108:3809a,3812a

TITLE: Polypyrazoles from aromatic dipropynones and aromatic dihydrazines

AUTHOR(S): Connell, J. W.; Bass, R. G.; Sinsky, M. S.; Waldbauer, R. O.; Hergenrother, P. M.

CORPORATE SOURCE: Dep. Chem., Virginia Commonw. Univ., Richmond, VA, 23284, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1987), 25(9), 2531-42
CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

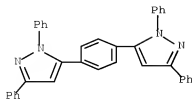
AB Two types of polypyrazoles, unsubstituted and phenylated, were prepared by a synthetic route involving the cyclopropylcondensation of aromatic dihydrazines and aromatic dipropynones. The polymers had inherent viscosities ≤ 1.05 dL/g and were soluble in AcNMe₂, CHCl₃ (phenylated polypyrazoles only), and H₂SO₄. The polymers exhibited glass transition temps. ranging from 202 to 266° and polymer decomposition temps. (10% weight loss) as measured by thermogravimetric anal. of 400-500° in air and 465-512° in N₂.

IT 6715-79-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as model for polypyrazoles)

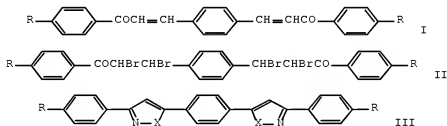
RN 6715-79-3 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1,3-diphenyl- (CA INDEX NAME)

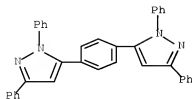


CC 35-5 (Chemistry of Synthetic High Polymers)
 IT 6715-79-3P 112078-63-4P 112078-64-5P 112078-65-6P
 112078-66-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as model for polypyrazoles)

L16 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1986:552988 HCAPLUS Full-text
 DOCUMENT NUMBER: 105:152988
 ORIGINAL REFERENCE NO.: 105:24653a,24656a
 TITLE: Heterocycles. Part 6. Synthesis of new
 substituted isoxazoles and pyrazoles
 AUTHOR(S): El-Rayyes, Nizar R.; Al-Johary, Abdel Jabbar
 CORPORATE SOURCE: Dep. Chem., Kuwait Univ., Kuwait, Kuwait
 SOURCE: Journal of the Iraqi Chemical Society (1984),
 9(1-2), 63-72
 CODEN: JICS DK; ISSN: 0379-8321
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 105:152988
 GI



AB Terephthalaldehyde was condensed with acetophenones to give the chalcones I (R = H, Br, OMe). Bromination of I gave the tetrabromo derivs. II. Reaction of II with NH₂OH or R₁NHNH₂ (R₁ = Me, Ph, C₆H₄Br-4) led to the formation of the azoles III (X = O, NR₁).
 IT 6715-79-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 6715-79-3 HCAPLUS
 CN 1H-Pyrazole, 5,5'--(1,4-phenylene)bis[1,3-diphenyl- (CA INDEX NAME)]



CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 5715-79-3P 103929-95-9P 104526-59-2P 104526-60-5P
104526-61-6P 104526-62-7P 104526-63-8P 104526-64-9P
104526-65-0P 104526-66-1P 104526-67-2P 104526-68-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L16 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1986:497104 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 105:97104

ORIGINAL REFERENCE NO.: 105:15684h,15685a

TITLE: Synthesis and some reactions of
phenylene-1,4-di(1-phenyl-1-propenone)

AUTHOR(S): Eltamany, Elsayed H.; Orabi, Mohamed; Ismail,
Elsayed I.; Elshahed, Fakhre A.

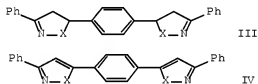
CORPORATE SOURCE: Fac. Sci., Suez Canal Univ., Ismailia, Egypt

SOURCE: Pakistan Journal of Scientific and Industrial
Research (1985), 28(3), 169-72
CODEN: PSIRAA; ISSN: 0030-9885

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



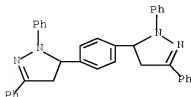
AB The condensation of MeCOPh with p-C₆H₄(CHO)₂ at 2:1 ratio gave 68%
PhCOCH:CHC₆H₄(CHO)-4 and 24% p-(PhCOCH:CH)C₆H₄ (I). When the ratio was 4:1
90% I was obtained. The epoxidn. of I gave 73% p-(PhCOCH:CH)C₆H₄ (II, RR1
= O). The Michael reaction of I with cyclohexanone gave 86% II (R = H, R1 =
2-oxocyclohexyl). The Friedel Crafts reaction of I with PhMe gave 42% II [R =
H, R1 = 4-MeC₆H₄]. The reactions of I with R₂NNH₂ (R₂ = H, Me) and HONH₂
gave 75 and 67% pyrazoles III (X = NR₂) and 83% isoxazole IV (X = O) resp.
Bromination of I gave 85% II (R = R1 = Br), which was reacted with H₂NNH₂ and
HONH₂ to give 74% pyrazole IV (X = NH) and 72% isoxazole IV (X = O), resp.
The Friedel Crafts reaction of II (R = R1 = Br) with PhMe gave 54% II (R = R1
= 4-MeC₆H₄).

IT 34135-42-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

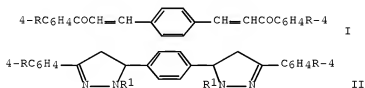
RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)

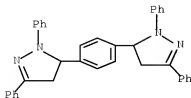


CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 28
IT 34135-42-7P 42931-83-9P 96504-02-8P 103929-89-1P
103929-90-4P 103929-91-5P 103929-92-6P 103929-93-7P
103929-94-8P 103929-95-9P 103929-96-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L16 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1985:615234 HCAPLUS Full-text
DOCUMENT NUMBER: 103:215234
ORIGINAL REFERENCE NO.: 103:34691a,34694a
TITLE: Heterocycles. 7. Synthesis of new pyrazolines
AUTHOR(S): El-Rayyes, Nizar; Al-Johary, Abdel Jabbar A.
CORPORATE SOURCE: Dep. Chem., Kuwait Univ., Kuwait, Kuwait
SOURCE: Journal of Chemical and Engineering Data (1985),
30(4), 500-2
CODEN: JCEAAX; ISSN: 0021-9568
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 103:215234
GI



AB Reaction of 1,4-C6H4(CHO)2 with p-RC6H4COMe (R = H, F, Cl, Br, MeO) or 2-acetylthiophene gave the dichalcones I, which were cyclized with R1NHNH2 (R1 = H, Me, Ph) to give the dipyrazolines II (17 compds.); II (R1 = H) were acetylated with Ac2O to give six II (R1 = Ac).
IT 34135-42-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 34135-42-7 HCAPLUS
CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 25, 27

IT 34135-42-7F 34135-46-1P 34135-49-4P 34135-51-8P
 34765-71-4P 34765-76-9P 96504-07-3P 96504-09-5P 96504-10-8P
 96504-11-9P 96504-12-0P 96504-13-1P 96504-14-2P 96504-15-3P
 96504-16-4P 96504-17-5P 96504-18-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L16 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1974:485114 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 81:85114

ORIGINAL REFERENCE NO.: 81:13473a,13476a

TITLE: Electrochemical behavior of N-aryl-2-pyrazolines. II. Anodic oxidation of 1,3,5-triaryl-2-pyrazolines and 4,4'-bis(3,5-diaryl-2-pyrazolin-1-yl)biphenyls in acetonitrile

AUTHOR(S): Pragst, F.; Siefke, B.

CORPORATE SOURCE: Sekt. Chem., Humboldt-Univ., Berlin, Ger. Dem. Rep.

SOURCE: Journal fuer Praktische Chemie (Leipzig) (1974), 316(2), 267-85

CODEN: JPCEAO; ISSN: 0021-8383

DOCUMENT TYPE: Journal

LANGUAGE: German

GI For diagram(s), see printed CA Issue.

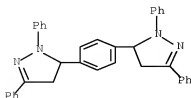
AB Polarog. oxidation, voltammetric, and coulometric data are reported for 24 pyrazolines I (R, R2 = H, Me, Ph, OMe, NMe2, Br, Cl, and (or) NO2; R1 = Ph or substituted phenyl) and 10 biphenyls II (R, R1 = Ph or substituted phenyl). The anodic behavior of I is mainly determined by R1. II were prepared by oxidative dimerization of the corresponding I.

IT 34135-42-7

RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, electrochem.)

RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA INDEX NAME)]



CC 77-1 (Electrochemistry)
 Section cross-reference(s): 22, 28
 IT 742-01-8 1450-62-0 2515-55-1 2515-58-4 2515-62-0 2574-33-6
 2574-34-7 2755-70-6 6969-06-8 7267-75-6 10180-02-6
 10180-07-1 10252-45-6 13393-41-4 13393-42-5 19429-34-6
 20739-83-7 34135-42-7 53103-83-6 53103-84-7
 53103-85-8 53103-86-9 53103-87-0 53103-88-1 53103-89-2
 53103-90-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, electrochem.)

L16 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1972:34158 HCAPLUS Full-text

DOCUMENT NUMBER: 76:34158

ORIGINAL REFERENCE NO.: 76:5531a,5534a

TITLE: Synthesis of unsaturated diketones and

Δ^2 -pyrazoline derivatives based on
 terephthalic dialdehyde

AUTHOR(S): Tsukerman, S. V.; Nikitchenko, V. M.;

Maslennikova, V. P.; Lavrushin, V. F.

CORPORATE SOURCE: Khar'k. Gos. Univ. im. Gor'kogo, Kharkov, USSR

SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1971),
 7(8), 1094-6

CODEN: KGSSAQ; ISSN: 0132-6244

DOCUMENT TYPE: Journal

LANGUAGE: Russian

GI For diagram(s), see printed CA Issue.

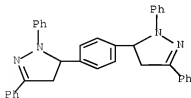
AB The condensation of terephthalaldehyde with aromatic and heterocyclic methyl ketones by the method of S. V. Tsukerman (1968) gave I, which refluxed with PhNHNH2 in EtOH in the presence of NaOH (method a) or with PhNHNH2.HCl in AcOH (method b) yielded II [R and % yields of I and II (method) given]: 2,4-(MeO)2C6H3, 46, 58(a); 2,4,6-(MeO)3C6H2, 53, 80(a); 4-Me2NC6H4, 43, 35(b); 4-ClC6H4, 80, 56(b); 4-BrC6H4, 76, 42(b); 4-O2NC6H4, 17, 73(b); 4-xenyl, 80, 50(a); 2-naphthyl, 46, 84(b); 5-methyl-2-furyl, 63, 65(a); 2-selenophenyl, 55, 45(b); 2-pyrrolyl, 76, -. Also the following II were prepared (r and % yield given): Ph, 60; 4-MeC6H4, 68, 4-MeOC6H4, 74; 2-furyl, 51; 2-thienyl, 65.

IT 34135-42-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
 INDEX NAME)



CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 26473-69-8P 26473-71-2P 26473-74-5P 26473-79-0P 26473-85-8P

26483-86-3P 26483-88-5P 26483-90-9P 26612-99-7P 28645-08-1P

34135-42-7P 34135-44-9P 34135-45-0P 34135-46-1P
34135-47-2P 34135-48-3P 34135-49-4P 34135-50-7P 34221-35-7P
34765-66-7P 34765-70-3P 34765-71-4P 34765-76-9P 34765-78-1P
34765-79-2P 34765-81-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L16 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1971:503161 HCAPLUS Full-text

DOCUMENT NUMBER: 75:103161

ORIGINAL REFERENCE NO.: 75:16287a,16290a

TITLE: Isomeric 1,4-dipyrzolinylbenzenes as spectra
displacers in liquid scintillators

AUTHOR(S): Tsukerman, S. V.; Maslennikova, V. P.;

Lavrushin, V. F.; Poduzhailo, V. F.

CORPORATE SOURCE: USSR

SOURCE: Zhurnal Prikladnoi Spektroskopii (1971), 14(6),
1069-75

CODEN: ZPSSBAX; ISSN: 0514-7506

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The absorption and fluorescence band maximum, relative quantum yields, scintillation efficiency, and external photoyields are given for 29 1,4-dipyrzolinylbenzenes in toluene and 1-methylnaphthalene solns. The scintillation activity is determined by the degree of the overlap of the absorption spectra of the compds. with the activator emission spectrum and by the mutual position of the emission spectra of the compds. and the spectral sensitivity curve of the photomultiplier. The connection of 2 pyrazoline rings through the phenyl ring in the 5, 3, or 1 positions has a low effect on the external light yield, as compared with 1,3,5-triphenylpyrazoline, but it yields several effective long wave scintillators with the 500-30 nm emission range.

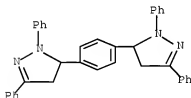
IT 34135-42-7

RL: PROC (Process)

(scintillation of, optical properties in relation to)

RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



CC 73 (Spectra by Absorption, Emission, Reflection, or Magnetic Resonance, and Other Optical Properties)

IT 34135-42-7 34135-43-8 34135-44-9 34135-45-0

34135-46-1 34135-47-2 34135-48-3 34135-49-4 34135-50-7

34135-51-8 34221-35-7

RL: PROC (Process)

(scintillation of, optical properties in relation to)

L16 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

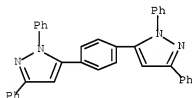
ACCESSION NUMBER: 1970:520949 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 73:120949
 TITLE: Polymers from 1,3-dipole addition reactions.
 Nitrilimine dipole from tetrazoles
 AUTHOR(S): Gotter, Loren D.; Stille, John K.
 CORPORATE SOURCE: Dep. Chem., Univ. Iowa, Iowa City, IA, USA
 SOURCE: Polymer Preprints (American Chemical Society,
 Division of Polymer Chemistry) (1969), 10(1),
 168-74
 CODEN: ACPPAY; ISSN: 0032-3934
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB A series of polymers containing pyrazole and triazole units in the chain were obtained by 1,3-dipolar addition of bisnitrilimines formed from tetrazoles with diyne and dinitrile dipolarophiles. The reaction of 2,2'-diphenyl-5,5'-m- and p-phenyleneditetrazole with the dipolarophiles m- and p-diethynylbenzene, terephthalonitrile, tetrafluoroterephthalonitrile, perfluoroglutaronitrile, and 4,4'-dicyanobiphenyl gave a series of thermally stable, high-mol.-weight polymers. The polypyrazoles were soluble in acid and in some cases in PhCl or 1,2,4-trichlorobenzene and had intrinsic viscosities as high as 1.67, while the polytriazoles were soluble in 1,2,4-trichlorobenzene and PhCl, but not in acid and had viscosities ranging up to 0.40. Thermogravimetric analyses of the finely powdered polymers showed breaks near 500° in air and N.

IT 6715-79-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 6715-79-3 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1,3-diphenyl- (CA INDEX NAME)



CC 35 (Synthetic High Polymers)

IT 6715-79-3P 6715-80-6P 6715-81-7P 6751-96-8P
 18861-85-3P 25949-36-4P 25949-37-5P 25949-38-6P 25949-39-7P
 25949-40-0P 26026-02-8P 26026-03-9P 26026-04-0P 26026-05-1P
 26026-06-2P 26026-07-3P 26098-49-7P 26098-50-0P 26098-51-1P
 26098-52-2P 26099-91-2P 26099-92-3P 26099-93-4P 26246-71-9P
 26246-72-0P 26266-23-9P 26266-24-0P 26266-25-1P 26471-81-8P
 29474-47-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L16 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1968:467793 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 69:67793
 ORIGINAL REFERENCE NO.: 69:12683a,12686a
 TITLE: Polymers from 1,3-dipole addition reactions:
 the nitrilimine dipole from acid hydrazide
 chlorides

AUTHOR(S): Stille, J. K.; Harris, F. W.
CORPORATE SOURCE: Univ. of Iowa, Iowa City, IA, USA
SOURCE: Journal of Polymer Science, Part A-1: Polymer Chemistry (1968), 6(8), 2317-30
CODEN: JPSPC3; ISSN: 0449-296X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An investigation of the suitability of the 1,3-dipole addition reaction of bisnitrilimines, generated from the corresponding acid hydrazide chlorides, with diene and dinitrile dipolarophiles was carried out. The reactions of iso- and terephthaloylphenylhydrazide chlorides and 4,4'-oxydibenzoylphenylhydrazide chloride with the dipolarophiles m- and p-diethynylbenzene, m-divinylbenzene, and perfluoroglutaronitrile in the presence of Et₃N gave moderate mol. weight polymers containing pyrazole or triazole units along the polymer backbone. The polymers were soluble in such polar solvents as hexamethylphosphoramide and acids but had inherent viscosities only as high as 0.32. The thermogravimetric anal. of the finely powdered polypyrazoles showed breaks near 500° in air and in N. 26 references.

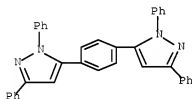
IT 6715-79-3

RL: USES (Uses)

(model compound for polymerization of dienes and diynes with bis(phenylhydrazones) of dicarboxylic acid chlorides)

RN 6715-79-3 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1,3-diphenyl- (CA INDEX NAME)



CC 35 (Synthetic High Polymers)

IT 6715-79-3 6715-80-6 6715-81-7 6751-96-8 20779-87-7

20779-88-8 20779-89-9

RL: USES (Uses)

(model compound for polymerization of dienes and diynes with bis(phenylhydrazones) of dicarboxylic acid chlorides)

L16 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1966:420782 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 65:20782

ORIGINAL REFERENCE NO.: 65:3855e-f

TITLE: Phenyl substituted dipyrazoles: 1,3-dipole addition reactions of sydnone and nitrilimines

AUTHOR(S): Stille, I. J. K.; Harris, F. W.; Bedford, M. A.

CORPORATE SOURCE: Univ. of Iowa, Ames

SOURCE: Journal of Heterocyclic Chemistry (1966), 3(2),

155-7

CODEN: JHTCAD; ISSN: 0022-152X

DOCUMENT TYPE: Journal

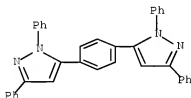
LANGUAGE: English

AB A series of phenyl-substituted phenylenedipyrazoles has been synthesized by

the 1,3-dipole addition reactions of phenylenedisynnone and

phenylenedinitrilimines on phenylacetylene as well as the reactions of phenylsyndnone and phenylnitrilimine on diethynylbenzenes. A preliminary study of solvents for the syndnone reaction has been made.

IT 5715-79-3P, Pyrazole, 5,5'-p-phenylenebis[1,3-diphenyl-
RL: PREP (Preparation)
(preparation of)
RN 6715-79-3 HCAPLUS
CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1,3-diphenyl- (CA INDEX NAME)



CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))
IT 6645-52-9P, Hydantoin, 5-[(4-iodopyrazol-1-yl)methyl]-2-thio-
6645-54-1P, Pyrazole, 3,3'-p-phenylenebis[1-phenyl- 6645-55-2P,
Pyrazole, 1,1'-p-phenylenebis[3-phenyl- 6645-63-2P, Acrolein,
3-mercapto-, hydrogen sulfate, Na salt, cis- 6645-63-2P,
Thiosulfuric acid, H₂S₂O₃, S-ester with 3-mercaptoacrolein, Na salt,
cis- 6645-65-4P, Terephthalic acid, bis(2-phenylhydrazide)
6645-66-5P, Isophthaloyl chloride, bis(phenylhydrazide)
6645-67-6P, Terephthaloyl chloride, bis(phenylhydrazide)
6648-06-2P, Alanine, N-[(4,5-diiodopyrazol-1-yl)acetyl]-3-phenyl-
6648-07-3P, Alanine, N-[(4,5-diiodopyrazol-1-yl)acetyl]-3-phenyl-,
compound with 2,2'-iminodiethanol (1:1) 6715-79-3P,
Pyrazole, 5,5'-p-phenylenebis[1,3-diphenyl- 6715-80-6P, Pyrazole,
3,3'-m-phenylenebis[1,5-diphenyl- 6715-81-7P, Pyrazole,
3,3'-p-phenylenebis[1,5-diphenyl- 6715-83-9P, Isophthalic acid,
bis(2-phenylhydrazide) 6751-96-8P, Pyrazole, 5,5'-m-
phenylenebis[1,3-diphenyl- 6752-12-1P, Pyrazole,
3,3'-m-phenylenebis[1-phenyl- 10301-11-8P, Syndnone,
3,3'-p-phenylenedi-
RL: PREP (Preparation)
(preparation of)

L16 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1966:420781 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 65:20781
ORIGINAL REFERENCE NO.: 65:3855d-e
TITLE: Cis- and trans-3-thiocyanatopropenal and the
synthesis of isothiazole
AUTHOR(S): Raap, R.
CORPORATE SOURCE: R & L Mol. Res. Ltd., Edmonton
SOURCE: Canadian Journal of Chemistry (1966), 44(11),
1324-7
CODEN: CJCHAG; ISSN: 0008-4042
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 65:20781

AB cf. Wille, et al., CA 57, 9835h. To synthesize isothiazole (I) from liquid
NH₃ and HCOCH:CHSCN (II), it was found necessary to use cis-II. Details are
given for the optimum realization of this isomer from HSCN and propynal. I

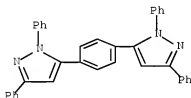
was also prepared from liquid NH₃ and cis-HCOCH:CHSSO₃Na (II), obtained from Na₂S₂O₃ and propynal. N.M.R. data for cis-I and II and trans-thiopropenals are given.

IT 5715-79-3P, Pyrazole, 5,5'-p-phenylenebis[1,3-diphenyl-
RL: PREP (Preparation)

(preparation of)

RN 6715-79-3 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1,3-diphenyl- (CA INDEX NAME)



CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 288-16-4P, Isothiazole 6645-63-2P, Acrolein, 3-mercapto-, hydrogen sulfate, Na salt, cis- 6645-63-2P, Thiosulfuric acid, H₂S₂O₃, S-ester with 3-mercaptoacrolein, Na salt, cis- 6645-65-4P, Terephthalic acid, bis(2-phenylhydrazide) 6645-66-5P, Isophthaloyl chloride, bis(phenylhydrazide) 6645-67-6P, Terephthaloyl chloride, bis(phenylhydrazide) 6715-79-3P, Pyrazole, 5,5'-p-phenylenebis[1,3-diphenyl- 6715-80-6P, Pyrazole, 3,3'-m-phenylenebis[1,5-diphenyl- 6715-81-7P, Pyrazole, 3,3'-p-phenylenebis[1,5-diphenyl- 6715-82-8P, Acrolein, 3-[(p-nitrophenyl)thio]-, trans- 6715-83-9P, Isophthalic acid, bis(2-phenylhydrazide) 6751-96-8P, Pyrazole, 5,5'-m-phenylenebis[1,3-diphenyl- 7199-49-7P, Biuret, 1,3-diphenyl-5-(5-phenyl-1,3,4-oxadiazol-2-yl)-
RL: PREP (Preparation)
(preparation of)

L16 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1966:412674 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 65:12674

ORIGINAL REFERENCE NO.: 65:2361a-d

TITLE: Polymers from 1,3-dipole addition reactions: The nitrilimine dipole

AUTHOR(S): Stille, J. K.; Harris, F. W.

CORPORATE SOURCE: Univ. of Iowa, Iowa City

SOURCE: Journal of Polymer Science, Part B: Polymer Letters (1966), 4(5), 333-6

CODEN: JPSBDU; ISSN: 0449-2986

DOCUMENT TYPE: Journal

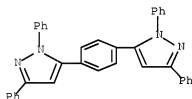
LANGUAGE: English

GI For diagram(s), see printed CA Issue.

AB Nitrilimine dipoles are formed by the action of base on acid hydrazide chlorides and react rapidly with acetylenes to form pyrazoles. Thus, iso- and terephthaloyl phenylhydrazides form m-C₆H₄(CCl: NNPh)₂ (Ia) and p-C₆H₄(CCl: NNPh)₂ (Ib), m. 165-7 and 205-6°, resp., when treated with PC15. They react with Et₃N to give the nitrilimine dipoles which react rapidly in situ with PhC.tplbond.CH(II) in refluxing C₅H₆ to give 3,3'-(m-phenylene)bis(1,5-diphenylpyrazole) and 3,3'-(p-phenylene)bis(1,5-diphenylpyrazole), m. 205-6 and 256-8°, resp. PhCCl:NNPh reacts with m- (IIia) and p-diethynylbenzene

(IIIb) to yield 5,5'-(m-phenylene)bis(1,3-diphenylpyrazole) and 5,5'-(p-phenylene)bis(1,3-diphenylpyrazole), m. 232-4 and 242-4°, resp. The nitrilimine dipoles which form from Ia and Ib in the presence of Et3N in refluxing C6H6 or pyridine in the absence of II undergo self-addition to form IV (R = m-C6H4 and p-C6H4, resp.) in 90% yield, precipitating during the course of the reaction. Similarly, Ia reacts with IIIa and IIIb in refluxing C6H6 in the presence of Et3N to give 80% V (R = m-C6H4) (Va) and V (R = p-C6H4) (Vb), resp., and Ib with IIIa and IIIb to yield VI (R = m-C6H4) (VIa) VI (R = p-C6H4) (VIb). The solubility of Va (containing m-C6H4 links only along the chain) is much greater in polar organic solvent than VIb containing entirely p-C6H4 links. Inherent viscosities of the 4 polymers are near 0.4 (0.25 g./100 ml. (Me2N)3PO or AcNMe2). Thermographic analysis curves show breaks from 420 to 480° in air and N at a heating rate of 2°/min.

IT 5715-79-3P, Pyrazole, 5,5'-p-phenylenebis[1,3-diphenyl-
 RL: PREP (Preparation)
 (preparation of)
 RN 6715-79-3 HCAPLUS
 CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[1,3-diphenyl- (CA INDEX NAME)



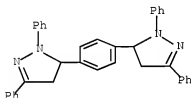
CC 45 (Synthetic High Polymers)
 IT 5715-79-3P, Pyrazole, 5,5'-p-phenylenebis[1,3-diphenyl-
 6715-80-6P, Pyrazole, 3,3'-m-phenylenebis[1,5-diphenyl-
 6715-81-7P, Pyrazole, 3,3'-p-phenylenebis[1,5-diphenyl-
 6751-96-8P, Pyrazole, 5,5'-m-phenylenebis[1,3-diphenyl-
 RL: PREP (Preparation)
 (preparation of)

L16 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1963:439521 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 59:39521
 ORIGINAL REFERENCE NO.: 59:7089e-f
 TITLE: Fluorescence spectral study of wavelength shifters for scintillation plastics
 AUTHOR(S): Sandler, Stanley R.; Tsou, K. C.
 CORPORATE SOURCE: Borden Chem. Co., Philadelphia, PA
 SOURCE: Journal of Chemical Physics (1963), 39(4), 1062-7
 CODEN: JCPSA6; ISSN: 0021-9606
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

AB An investigation of the fluorescence spectra of 1,3,5-triaryl-2- pyrazolines indicated that substituents in the 3-Ph ring shifted the fluorescence-emission wavelength linearly with Brown's σ_p^+ . The excited state is thought to have a partial pos. charge located on C-3 of the pyrazoline ring. The shift in the absorption spectral bands of 1,3,5-triphenyl-2-pyrazoline (I) with concentration is presented as evidence of a dimer or an associated complex. The fluorescence quenching at higher concns. may be due to the energy dissipating effect of the dimers or complexes. The high extinction

coefficient of the ultraviolet maximum and yet the similarity of the fluorescence intensity of 4,4'-bis-[5-(1,3-diphenyl-2-pyrazolyl)] benzene to I is explained on the basis of an internal quenching mechanism. The efficiency of these 2 compds. as wavelength shifters in plastic scintillators are approx. equal.

IT 34135-42-7, 2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl-
(fluorescence of, and as wavelength shifter in plastic
scintillators)
RN 34135-42-7 HCAPLUS
CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



CC 10 (Spectra and Some Other Optical Properties)
IT 91-44-1, Coumarin, 7-(diethylamino)-4-methyl- 1450-62-0,
2-Pyrazoline, 3-(p-methoxyphenyl)-1,5-diphenyl- 2444-68-0,
Anthracene, 9-vinyl- 2515-46-0, 2-Pyrazoline, 3-methyl-1,5-
diphenyl- 2515-55-1, 2-Pyrazoline, 3,5-diphenyl-1-p-tolyl-
2515-57-3, 2-Pyrazoline, 3-(p-hydroxyphenyl)-1,5-diphenyl-
2515-62-0, 2-Pyrazoline, 1,5-diphenyl-3-styryl- 10180-02-6,
2-Pyrazoline, 3-(p-chlorophenyl)-1,5-diphenyl- 10252-45-6,
2-Pyrazoline, 1-(p-nitrophenyl)-3,5-diphenyl- 13393-41-4,
2-Pyrazoline, 1,5-diphenyl-3-p-tolyl- 16492-49-2, 2-Pyrazoline,
5-methyl-1,3-diphenyl- 19429-34-6, 2-Pyrazoline,
3-(p-bromophenyl)-1,5-diphenyl- 34135-42-7, 2-Pyrazoline,
5,5'-p-phenylenebis[1,3-diphenyl- 96667-93-5, 2-Pyrazoline,
5-[p-(dimethylamino)phenyl]-1-phenyl-3-p-tolyl-
(fluorescence of, and as wavelength shifter in plastic
scintillators)

L16 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1961:141850 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 55:141850

ORIGINAL REFERENCE NO.: 55:26738a-b

TITLE: Amplitude analyzer of spectra of nuclear
radiation

AUTHOR(S): Vyazemskii, V. O.; Kazarinov, Yu. M.; Trifonov,
V. V.

SOURCE: Izvest. Leningrad. Elektrotekh. Inst. (1959),
(No. 38), 237-48
From: Referat. Zhur., Fiz. 1960, Abstr. No.
19184.

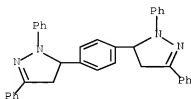
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB A 128-channel (capacity 216 impulses each) analyzer AMA-3s with a register
based on the potentialoscope LN-4 is described. The average resolving time is
0.5n + 22 μsec., where n is the channel number

IT 34135-42-7P, 2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl-
RL: PREP (Preparation)

(preparation of)
 RN 34135-42-7 HCAPLUS
 CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
 INDEX NAME)



CC 3A (Nuclear Phenomena)
 IT 92-71-7P, Oxazole, 2,5-diphenyl- 573-34-2P, Oxazole,
 2,4,5-triphenyl- 742-01-8P, 2-Pyrazoline, 1,3,5-triphenyl-
 2515-51-7P, 2-Pyrazoline, 1,3,4-triphenyl- 2515-55-1P,
 2-Pyrazoline, 3,5-diphenyl-1-p-tolyl- 2515-62-0P, 2-Pyrazoline,
 1,5-diphenyl-3-styryl- 2538-52-5P, 2-Pyrazoline, 1,3-diphenyl-
 2574-33-6P, 2-Pyrazoline, 5-(p-methoxyphenyl)-1,3-diphenyl-
 2755-65-9P, 2-Pyrazoline, 1-(2-naphthyl)-3,5-diphenyl- 3274-61-1P,
 Pyrrole, 2,3,5-triphenyl- 4675-18-7P, Oxazole, 4,5-diphenyl-
 6652-42-2P, 4-Oxazolin-2-one, 3,4,5-triphenyl- 15345-47-8P,
 Pyrrole, 1,2,3,5-tetraphenyl- 16492-49-2P, 2-Pyrazoline,
 5-methyl-1,3-diphenyl- 17679-73-1P, 2-Pyrazoline,
 1,3,4,5-tetraphenyl-, trans- 17679-74-2P, 2-Pyrazoline,
 1,3,4,5-tetraphenyl-, cis- 34135-42-7P, 2-Pyrazoline,
 5,5'-p-phenylenebis[1,3-diphenyl- 54879-94-6P, Indole,
 1,2,3-triphenyl- 96770-79-5P, 2-Pyrazoline, 5,5'-p-phenylenebis[3-
 methyl-1-phenyl- 116378-43-9P, 2-Oxazolidinone,
 4-[p-(1,3-diphenyl-2-pyrazolin-5-yl)phenyl]-5-phenyl-(?)
 119570-47-7P, Chryseno[6,5-d]oxazole, 2-phenyl-
 RL: PREP (Preparation)
 (preparation of)

L16 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1961:141849 HCAPLUS Full-text

DOCUMENT NUMBER: 55:141849

ORIGINAL REFERENCE NO.: 55:26737i,26738a

TITLE: Length of light emission of plastic
 scintillators

AUTHOR(S): Baroni, E. E.; Kilin, S. F.; Kovyrzina, K. A.;
 Rozman, I. M.; Shoniya, V. M.

SOURCE: Pribery i Tekh. Eksperimenta (1961), 6(No. 3),
 72-4

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB The results of measuring the length of light emission and relative efficiency
 of luminescence for 29 plastic scintillators based on polysterol and
 poly(vinyl toluol) are given.

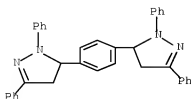
IT 34135-42-7P, 2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl-

RL: PREP (Preparation)

(preparation of)

RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
 INDEX NAME)



CC 3A (Nuclear Phenomena)

IT 92-71-7P, Oxazole, 2,5-diphenyl- 573-34-2P, Oxazole,
2,4,5-triphenyl- 742-01-8P, 2-Pyrazoline, 1,3,5-triphenyl-
2515-51-7P, 2-Pyrazoline, 1,3,4-triphenyl- 2515-55-1P,
2-Pyrazoline, 3,5-diphenyl-1-p-tolyl- 2515-62-0P, 2-Pyrazoline,
1,5-diphenyl-3-styryl- 2538-52-5P, 2-Pyrazoline, 1,3-diphenyl-
2574-33-6P, 2-Pyrazoline, 5-(p-methoxyphenyl)-1,3-diphenyl-
2755-65-9P, 2-Pyrazoline, 1-(2-naphthyl)-3,5-diphenyl- 3274-61-1P,
Pyrrole, 2,3,5-triphenyl- 4675-18-7P, Oxazole, 4,5-diphenyl-
6652-42-2P, 4-Oxazolin-2-one, 3,4,5-triphenyl- 15345-47-8P,
Pyrrole, 1,2,3,5-tetraphenyl- 16492-49-2P, 2-Pyrazoline,
5-methyl-1,3-diphenyl- 17679-73-1P, 2-Pyrazoline,
1,3,4,5-tetraphenyl-, trans- 17679-74-2P, 2-Pyrazoline,
1,3,4,5-tetraphenyl-, cis- 34135-42-7P, 2-Pyrazoline,
5,5'-p-phenylenebis[1,3-diphenyl- 54879-94-6P, Indole,
1,2,3-triphenyl- 96770-79-5P, 2-Pyrazoline, 5,5'-p-phenylenebis[3-
methyl-1-phenyl- 116378-43-9P, 2-Oxazolidinone,
4-[p-(1,3-diphenyl-2-pyrazolin-5-yl)phenyl]-5-phenyl-(?)
119570-47-7P, Chryseno[6,5-d]oxazole, 2-phenyl-
RL: PREP (Preparation)
(preparation of)

L16 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1961:33049 HCAPLUS Full-text

DOCUMENT NUMBER: 55:33049

ORIGINAL REFERENCE NO.: 55:6471a-f

TITLE: Synthesis of some Δ^2 -pyrazoline
derivatives

AUTHOR(S): Baroni, E. E.; Kovyrzina, K. A.; Andreeshchev,
E. A.

SOURCE: Zhurnal Obshchei Khimii (1960), 30, 2002-8

CODEN: ZOKHA4; ISSN: 0044-460X

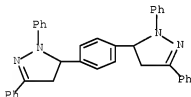
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. CA 52, 6965c. MeCH:CHCOme (21.05 g.) and 26.6 g. BzH saturated with HCl with cooling and the mixture kept 2 days in the cold gave after treatment with aqueous NaHSO₃ and extraction with Et₂O 31.5% propenyl styryl ketone, b_p 120-5°. Passage of HCl (followed by air-blowing) into 10 g. deoxybenzoin (I) and 11 g. BzH at 20° until a solid mass formed and the whole treated with EtOH yielded some chlorobenzylidenedeoxybenzoin, m. 154-5° [Stobbe, et al., Ber. 34, 3897(1901)]. Reaction of 19.6 g. I in 80 ml. hot MeOH with 30 ml. 32% HCHO solution, 0.5 ml. piperidine and 10 ml. MeOH with 0.5 ml. Ac₂O gave methylenedeoxybenzoin (II) (Fiesselmann and Ribka, CA 50, 15480e), which was extracted with Et₂O instead of CH₂Cl₂. Heating ethyl styryl ketone with PhNHNH₂ in AcOH 1 hr. gave 1,5-diphenyl-3-ethyl- Δ^2 -pyrazoline, m. 69.5°, purified by vacuum sublimation. Similarly, 4-phenylbutadienyl phenyl ketone gave 78% yellow-green 1,3-diphenyl-5-styryl-, m. 126-7°, and MeCH:CHCOCH:CHPh

gave 1,5-diphenyl-3-propenyl- Δ^2 -pyrazoline, b0.5 184-6° (the reaction gave as a by-product an unidentified substance, m. 220°). Benzylidenedeoxybenzoin similarly gave 1,3,4,5-tetraphenyl- Δ^2 -pyrazoline, separated into: the cis isomer, m. 213-14°, which did not give the Knorr pyrazoline test, and the trans isomer (83%), m. 152.5-53°. II gave cis-1,3,4-triphenyl- Δ^2 -pyrazoline, 89%, m. 207-8°, which did not give the Knorr test. The following were prepared (reagents, product, % yield, and m.p. given): benzalacetophenone and p-tolylhydrazine, 1-(p-tolyl)-3,5-diphenyl- Δ^2 -pyrazoline, 82, 166°; β -naphthylhydrazine and benzalacetophenone, 1-(β -naphthyl)-3,5-diphenyl- Δ^2 -pyrazoline, 83, decomposing 179.5°; furfurylideneacetophenone and PhNHNH2, 1,3-diphenyl-5-furyl- Δ^2 -pyrazoline, 86, 124°; 1,4-bis(β -acetylvinyl)benzene and PhNHNH2, 1,4-bis(1-phenyl-3-methyl- Δ^2 -pyrazolin-5-yl)benzene, 72, 224-5°; 1,4-bis(1-phenyl-1-propenone)benzene and PhNHNH2, 1,4-bis(1,3-diphenyl- Δ^2 -pyrazolin-5-yl)benzene, 83, decomposing 215°. Treatment of 36.5 g. (CO2Et)2 with MeONa (from 16 g. MeOH and 12.5 g. Na) in Et2O, then with 30 g. AcPh, and with a further 30 g. AcPh after 4 hrs., gave after the usual treatment an unstated yield of 1,6-diphenylhexane-1,3,4,6-tetraone (Finar, CA 50, 2551f). This and PhNHNH2 gave 73% 1,1',5,5'-tetraphenyl-3,3'-dipyrazolyl, m. 231°. Absorption spectra of the products were shown. Attention was drawn to an error in Finar's description of proportions of reactants used; the above proportions were correct.

IT 34135-42-7P, 2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl-
RL: PREP (Preparation)
(preparation of)
RN 34135-42-7 HCAPLUS
CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



CC 10G (Organic Chemistry: Heterocyclic Compounds)
IT 2515-51-7P, 2-Pyrazoline, 1,3,4-triphenyl-, cis- 2515-55-1P,
2-Pyrazoline, 3,5-diphenyl-1-p-tolyl- 2755-65-9P, 2-Pyrazoline,
1-(2-naphthyl)-3,5-diphenyl- 2755-71-7P, 2-Pyrazoline,
5-(2-furyl)-1,3-diphenyl- 17679-73-1P, 2-Pyrazoline,
1,3,4,5-tetraphenyl-, trans- 17679-74-2P, 2-Pyrazoline,
1,3,4,5-tetraphenyl-, cis- 34135-42-7P, 2-Pyrazoline,
5,5'-p-phenylenebis[1,3-diphenyl- 57212-99-4P, 1,4-Hexadien-3-one,
1-phenyl- 75955-67-8P, 2-Pyrazoline, 1,3-diphenyl-5-styryl-
79349-43-2P, 3,3'-Bipyrazole, 1,1',5,5'-tetraphenyl- 96770-79-5P,
2-Pyrazoline, 5,5'-p-phenylenebis[3-methyl-1-phenyl- 101574-24-7P,
2-Pyrazoline, 3-ethyl-1,5-diphenyl- 101792-57-8P, 2-Pyrazoline,
1,5-diphenyl-3-propenyl- 102313-68-8P, Hexanophenone,
4'-(2-hydroxy-1-naphthylazo)- 102955-79-3P, Octanophenone,
4'-(2-hydroxy-1-naphthylazo)- 103047-12-7P, Octanophenone,
4'-(5-hydroxy-3-methyl-1-phenylpyrazol-4-ylazo)- 115322-84-4P,
Dodecanophenone, 4'-(2-hydroxy-1-naphthylazo)-
RL: PREP (Preparation)
(preparation of)

L16 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1959:72554 HCAPLUS Full-text

DOCUMENT NUMBER: 53:72554

ORIGINAL REFERENCE NO.: 53:13139b-i

TITLE: 1,3,5-Triaryl-2-pyrazolines for use as scintillation solutes

AUTHOR(S): Wiley, Richard H.; Jarboe, C. H.; Hayes, F. N.; Hansbury, E.; Nielsen, J. T.; Callahan, P. X.; Sellars, M. C.

CORPORATE SOURCE: Univ. of Louisville, Louisville, KY

SOURCE: Journal of Organic Chemistry (1958), 23, 732-8

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 53:72554

GI For diagram(s), see printed CA Issue.

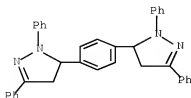
AB The title compds., prepared for evaluation as solutes in liquid scintillation counters, were found to be of interest since they showed considerable pulse height, were sufficiently soluble for practical use, and were not appreciably self-quenching. 4-PhC6H4CHO (3.64 g.) and 3.92 g. 4-PhC6H4Ac (I) in 130 ml. 95% EtOH mixed with 4 ml. 20% NaOMe-MeOH solution, kept 20 hrs. at room temperature, the precipitate filtered off, washed with 95% EtOH, and recrystd. twice from C6H6 gave 5.74 g. 4-PhC6H4CH:CHCOC6H4Ph-4, m. 195-7°. Similarly were prepared the following RCH:CHCOR' (R, R', m.p., and % yield given): p-phenylene, 3-bis-1-(3-pyridylacrylyl) (from terephthalaldehyde and 3-acetylpyridine), 233-4° (EtOH), 85; 1-C10H7, 2-C10H7, 158-60° (C6H6), 79; 4-Et2NC6H4, 4-PhC6H4, 164-5° (EtOCH2CH2OH), 82; Ph, 2-C10H7, 106° (EtOH), 98; 3,4-(EtO)2C6H3, 4-PhC6H4, 147.5-9.0° (EtOH), 98; 1-C10H7, 4-PhC6H4, 149° (Me2CO), 67; 4-Me2NC6H4, 4-PhC6H4, 160-3° (AcOH-H2O), 60; 9-anthryl, Ph, 124-5° (C6H6), 76; 4-PhC6H4, Ph, 111.5-12.5° (EtOH), 72; 4-PhC6H4, 2-C10H7, 141-2° (C6H6), 81. 4-PhC6H4CH:CHBz (0.71 g.) and 0.46 g. 4-PhC6H4NHNH2 in 15 ml. AcOH heated 2 hrs. at 100° on a H2O bath, kept 14 hrs. at room temperature, the precipitate filtered off, washed with 95% EtOH, and recrystd. from C6H6-95% EtOH gave 0.79 g. NR''.N:CR'.CH2.CHR (II) (R' = R = 4-biphenyl, R' = Ph), m. 183°. The following II were reported (R'', R', R, m.p., and % yield given): 4-PhC6H4, Ph, Ph, 178-8.5° (C6H6-EtOH), 73; 4-PhC6H4, Ph, 4-MeOC6H4, 150-1° (EtOH), 65; Ph, Ph, 9-anthryl, 231-3° (C6H6), 75; Ph, Ph, 4-PhC6H4, 168-9° (PhMe), 59; Ph, 2-C10H7, 4-PhC6H4, 231-3° (PhMe), 61; Ph, 4-PhC6H4, 4-MeOC6H4, 185° (Me2CO), 68; Ph, 4-PhC6H4, 3,4-(MeO)2C6H3, 165-7° (EtOH), 76; Ph, 4-PhC6H4, 4-Me2CHC6H4 (III), 165.5-7.0° (EtOH), 55; Ph, 4-PhC6H4, 1-C10H7, 210° (PhMe-AcOH), 65; Ph, 4-PhC6H4, 4-Et2NC6H4, 178-9° (PhMe), 64; Ph, Ph, 1-C10H7, 173-4° (EtOH), -; 4-HO2CC6H4, Ph, 4-MeOC6H4, 213-15 (EtOH), -; Ph, 4-PhC6H4, Ph, 204-6° (EtOH), -; Ph, 4-MeOC6H4, 4-MeOC6H4, 147-8° (EtOH), -; Ph, Ph, 4-Me2NC6H4, 142-3° (EtOH), -; Ph, 4-HOC6H4, Ph, 129-34° (EtOH), -; Ph, Ph, 4-HOC6H4, 148.5-9.5° (EtOH), -. 4-Me2CHC6H4CHO (3.0 g.) and 4.0 g. I in 75 ml. 95% EtOH treated with 75% NaOEt-EtOH solution, kept 24 hrs., the precipitate filtered off, washed with H2O, and recrystd. from EtOCH2CH2OH gave 4.2 g. RCOCH2CHR' CH2COR'' (IV) (R = R' = 4-PhC6H4, R' = 4-Me2CHC6H4) (V), m. 210°. The following IV (Michael addition products) were reported (R, R', R'', m.p., and % yield given): 4-PhC6H4, Ph, 4-PhC6H4, 185.5-6.5°, 93; 3-pyridyl, 3-pyridyl, 3-pyridyl, 145-6° (EtOH-H2O), 80. V (5.0 g.) and 1.1 g. PhNHNH2 in 25 ml. AcOH heated 2 hrs. at 80°, cooled to room temperature, the precipitate filtered off, washed with H2O, and recrystd. once from C6H6 and twice from 95% EtOH gave 1.2 g. III, m. 167°. The spectral characteristics and the scintillation and fluorescence data are recorded.

IT 34135-42-7, 2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl- (fluorescence and scintillation of)

RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA

INDEX NAME)



CC 10G (Organic Chemistry: Heterocyclic Compounds)
 IT 34135-42-7, 2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl-
 (fluorescence and scintillation of)

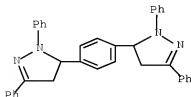
L16 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1952:63777 HCAPLUS
 DOCUMENT NUMBER: 46:63777
 ORIGINAL REFERENCE NO.: 46:10633d-g
 TITLE: Diaryl pyrazolines
 INVENTOR(S): Kendall, John D.; Duffin, Geo. F.
 PATENT ASSIGNEE(S): Ilford Ltd.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|--------------|
| GB 669591 | | 19520402 | GB 1949-15010 | 194906 03 |

AB 1,3-Diaryl pyrazolines and derivs. containing a 5-substituent are produced by treating a 1-aryl pyrazoline or its derivative in a basic medium such as pyridine or alc. alkali with a diazonium salt prepared from a primary amine. Thus, aniline 0.93 is dissolved in concentrate HCl 2.5 and H₂O 2.5, cooled to 5°, and diazotized by the addition of an aqueous solution of NaNO₂ 0.7 parts. This solution is added to 1-phenylpyrazoline 1.45 in pyridine 10 parts, maintaining the temperature between 0-5°. After 1 hr., the mixture is diluted with H₂O 100 and filtered. Recrystn. from EtOH gives 1,3-diphenylpyrazoline, m. 152°. The following pyrazoline derivs. were similarly prepd: 1,3-di(m-tolyl), m. 120°; 3-phenyl-1-(m-tolyl), m. 88.5°; 1-phenyl-3-(m-tolyl), m. 77°; 1-phenyl-3-(p-bromophenyl), m. 130°; 1-phenyl-3-(p-sulfophenyl), m. 300°; 1,3,5-triphenyl, m. 145°; 1,3-diphenyl-5-methyl, m. 105°; 1,5-diphenyl-3-p-tolyl, m. 154°; 1,5-diphenyl-3-p-methoxyphenyl, m. 142°; 1,5-diphenyl-3-p-ethoxyphenyl, m. 131°; 1,5-diphenyl-3-p-phenoxyphenyl, m. 162°; 1,5-diphenyl-3-(4-biphenyl), m. 205°; 1,5-diphenyl-3-(4-ethoxy-3-methylphenyl), m. 135°; 1-phenyl-3,5-bis(4'-chlorobiphenyl), m. 151°; 1,3-di-phenyl-5-p-methoxyphenyl, m. 124°; 1-phenyl-3-p-methoxy-phenyl-5-p-tolyl, m. 127°; 1-phenyl-3-p-tolyl-5-p-methoxy-phenyl, m. 141°; 1-phenyl-3,5-bis(p-methoxyphenyl), m. 147°; and 1,4-bis(1,3-diphenyl-5-pyrazolinyl)benzene, m. 290°. These products may be used as textile whitening agents.

IT 34135-42-7P, 2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl-
 RL: PREP (Preparation)
 (preparation of)
 RN 34135-42-7 HCAPLUS

CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
INDEX NAME)



CC 25 (Dyes and Textiles Chemistry)
IT 742-01-8P, 2-Pyrazoline, 1,3,5-triphenyl- 1450-62-0P,
2-Pyrazoline, 3-(p-methoxyphenyl)-1,5-diphenyl- 2538-52-5P,
2-Pyrazoline, 1,3-diphenyl- 2574-33-6P, 2-Pyrazoline,
5-(p-methoxyphenyl)-1,3-diphenyl- 2755-70-6P, 2-Pyrazoline,
3-(4-biphenyl)-1,5-diphenyl- 10180-07-1P, 2-Pyrazoline,
3,5-bis(p-methoxyphenyl)-1-phenyl- 13393-41-4P, 2-Pyrazoline,
1,5-diphenyl-3-p-tolyl- 16492-49-2P, 2-Pyrazoline,
5-methyl-1,3-diphenyl- 27423-12-7P, 2-Pyrazoline,
3-(p-phenoxyphenyl)-1,5-diphenyl- 34135-42-7P,
2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl- 49663-40-3P,
2-Pyrazoline, 3-(p-bromophenyl)-1-phenyl- 57845-03-1P,
2-Pyrazoline, 5-(p-methoxyphenyl)-1-phenyl-3-p-tolyl- 78369-87-6P,
2-Pyrazoline, 1-phenyl-3-m-tolyl- 78369-88-7P, 2-Pyrazoline,
3-phenyl-1-m-tolyl- 78369-89-8P, 2-Pyrazoline,
3-(p-ethoxyphenyl)-1,5-diphenyl- 78369-90-1P, 2-Pyrazoline,
3-(4-ethoxy-m-tolyl)-1,5-diphenyl- 78380-20-8P, 2-Pyrazoline,
1,3-di-m-tolyl- 79485-99-7P, 2-Pyrazoline, 3-(p-methoxyphenyl)-1-
phenyl-5-p-tolyl- 721415-85-6P, Morpholine, 4-[N-(p-methoxyphenyl)-
3-nitrosulfanilyl]- 853789-39-6P, Benzenesulfonic acid,
p-(1-phenyl-2-pyrazolin-3-yl)- 857180-15-5P, 2-Pyrazoline,
3,5-bis(4'-chloro-4-biphenyl)-1-phenyl- 857181-59-0P,
2-Pyrazoline, 5-(p-methoxyphenyl)-1-phenyl-5-p-tolyl-
RL: PREP (Preparation)
(preparation of)

L16 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1907:4640 HCAPLUS Full-text

DOCUMENT NUMBER: 1:4640

ORIGINAL REFERENCE NO.: 1:1129f-i,1130a-e

TITLE: Condensation of Terephthalic Aldehyde with
Ketones

AUTHOR(S): Lendenfeld, H. V.

SOURCE: Monatshefte fuer Chemie (1907), 27, 969-80
CODEN: MOCMB7; ISSN: 0026-9247

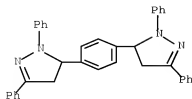
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Terephthalic aldehyde and acetophenone were condensed in presence of potassium hydroxide, and the product crystallized from methyl alcohol. There were thus obtained light yellow crystals of p-phenyl-1-propenone-1-benzaldehyde, $C_4H_3.CO.CH = CH.C_6H_4CHO$, m. 125°. Yield 30% of the theoretical. The crystals are soluble in concentrate sulphuric acid, very soluble in benzene and glacial acetic acid, hot alcohol and ether, difficultly soluble in cold water and ether. That portion of the above product which was insoluble in methyl alcohol was recrystallized from chloroform, as it is insoluble in most

solvents. Yellow hexagonal plates, m. 200°, which proved to be the product of the condensation of two molecules of the ketone with one of the aldehyde, phenylene-1,4-di(1-phenyl-1-propenone), $\text{C}_6\text{H}_3\text{COCH} = \text{CH}.\text{C}_6\text{H}_4\text{CH} = \text{CH}.\text{CO}.\text{C}_6\text{H}_3$. With phenylhydrazine the diketone yields a dipyrazoline, m. 300° soluble in pyridine with a blue fluorescence. The compound is phenylene-1,4-di(diphenyl-3-5- pyrazoline), $\text{C}_{24}\text{H}_{26}\text{N}_4$. Phenylene-1,4-di(1-phenyl-3-chlor-1- propenone), $\text{C}_4\text{H}_6.\text{CO}.\text{CH}_3\text{CHCl}.\text{C}_6\text{H}_4\text{CHCl}.\text{CH}.\text{CO}.\text{C}_6\text{H}_2$, was prepared by passing HCl gas through terephthalic aldehyde and acetophenone suspended in glacial acetic acid; the solid cake formed was dried in vacuo to remove both acids, washed with methyl alcohol and crystallized from nitrobenzene, which was not allowed to boil. The substance is almost insoluble in ordinary solvents, and forms colorless crystals, m. 194°, which lose HCl if heated to 160° and are converted in phenylene-1,4-di(1-phenyl-1- propenone). No monoketonic condensation product was obtained even upon reducing the amount of ketone. Phenylene-1,4-di(1-phenyl-2- methyl-1-propenone), $\text{C}_8\text{H}_3.\text{CO}.\text{C}(\text{CH}_3) : \text{CH}.\text{C}_8\text{H}_4.\text{CH} : \text{C}(\text{CH}_3).\text{CO}.\text{C}_4\text{H}_5$, was made by condensing terephthalic aldehyde and phenylethyl ketone with KOH; the reaction goes slowly and yields 30% of the aldehyde used; the substance forms colorless crystals m. 162° which react with phenylhydrazine to form a compound crystallizing in yellow needles which shrink at 245° and m. 254° with previous decomposition. Phenylene-1,4-di(1-phenyl-2-methyl-3-chlor- 1-propenone), $\text{C}_{20}\text{H}_{34}\text{Cl}_2$, was prepared by condensing the aldehyde and ketone with HCl gas; the yield is very small. The compound crystallizes in long rhombic plates decomposing at 240°, HCl being given off. 1,p-Tolyl-1-propenone-3-p-benzaldehyde, $\text{C}_{17}\text{H}_{14}\text{O}_2$, was made by condensing terephthalic aldehyde and tolylmethylketone with KOH; it forms yellow needles, m. 130°, very soluble in benzene, glacial acetic, acid, hot alcohol and ether forms a phenylhydrazone, crystallizing in red needles, m. 224°. Phenylene-1,4-di(1-p-tolyl-1-propenone), $\text{C}_{20}\text{H}_{12}\text{O}_3$, was obtained by using two molecules of the ketone to one of the aldehyde; crystallizes in needles, m. 230-238°, soluble in hot benzene, glacial acetic acid and alcohol, insoluble in ether. With phenylhydrazine it forms a yellow non-crystalline mass, which gives the pyrazoline reaction. Phenylene-1,4-di(1-p-tolyl-3-chlor-1- propenone), $\text{C}_{20}\text{H}_{24}\text{O}_2\text{Cl}_2$, was made from the aldehyde and ketone with HCl gas. It crystallizes from xylene in colorless needles m. 228-230°, which are insoluble in alcohol, benzene and ether, and which lose HCl upon heating. 1-p-methoxyphenyl-1-propenone-3-p- benzaldehyde, $\text{CH}_3\text{OC}_6\text{H}_4\text{CO}.\text{CH} : \text{CH}.\text{C}_6\text{H}_4.\text{CHO}$, made from the aldehyde and anisylmethylketone using one molecule of each; a small amount of the symmetrical product is formed. It crystallizes in yellow needles, m. 121° which are very soluble in hot alcohol and ether, benzene and glacial acetic-acid. The hydrazone m. 208°. Phenylene-1,4-di(1-p-methoxyphenyl-1-propenone), $\text{C}_{26}\text{H}_{22}\text{O}_4$, made from one molecule of the aldehyde and two molecules of the ketone, yellow leaflets m. 250°, which are difficultly soluble in alcohol, benzene, ether and glacial acetic acid.

IT 34135-42-7F, Δ2-Pyrazoline, 5,5'-p-phenylenebis[1,3-diphenyl-
 RL: PREP (Preparation)
 (preparation of)
 RN 34135-42-7 HCAPLUS
 CN 1H-Pyrazole, 5,5'-(1,4-phenylene)bis[4,5-dihydro-1,3-diphenyl- (CA
 INDEX NAME)



CC 10 (Organic Chemistry)

IT 3251-38-5P, Acrylophenone, β,β' -p-phenylenebis-
 26483-82-9P, Acrylophenone, β,β' -p-phenylenebis[4-methyl-
 26483-84-1P, Acrylophenone, β,β' -p-phenylenebis[4-methoxy-
 34135-42-7P, Δ^2 -Pyrazoline, 5,5'-p-phenylenebis[1,3-
 diphenyl- 42931-83-9P, p-Tolualdehyde, α -(benzoylmethylene)-
 84857-54-5P, p-Tolualdehyde, α -(p-tolylmethylene)-
 859941-59-6P, Propiophenone, α,α' -(p-
 phenylenedimethylene)bis- 859954-86-2P, Propiophenone,
 β,β' -p-phenylenebis[β -chloro- α -methyl-
 860763-50-4P, Propiophenone, β,β' -p-phenylenebis[β -
 chloro- 861610-51-7P, Acrylophenone, β,β' -p-
 phenylenebis[β -chloro-4-methyl- 866997-97-9P, p-Tolualdehyde,
 α -(anisoylmethylene)-
 RL: PREP (Preparation)
 (preparation of)

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